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CANADA

THE DEPARTMENT OF

NATIONAL HEALTH

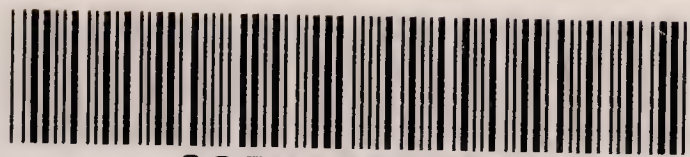
AND WELFARE - OTTAWA

ANNUAL REPORT

1949-1950

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**THE DEPARTMENT OF
NATIONAL HEALTH AND WELFARE
ANNUAL REPORT**

**FOR THE FISCAL YEAR
ENDED MARCH 31**

1950

**Edmond Cloutier, C.M.G., B.A., L.Ph.,
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Ottawa, 1950**

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To His Excellency Field Marshal the Right Honourable the Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., LL.D., A.D.C., Governor-General and Commander-in-Chief of Canada.

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1950.

Respectfully submitted,


PAUL MARTIN,
Minister of National Health and Welfare.

April 1, 1950.



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*That all might share in the national
heritage of health and well-being,
was Canada's constant objective.*

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DEPARTMENT OF NATIONAL HEALTH AND WELFARE

MINISTER

HONOURABLE PAUL MARTIN, K.C., P.C., M.P., M.A., LL.M., LL.D.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (HEALTH)

G. D. W. CAMERON, M.D., C.M., D.P.H.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (WELFARE)

G. F. DAVIDSON, B.A., M.A., Ph.D.

HEALTH BRANCH

Director of Health Services,

H. A. ANSLEY, M.D., D.P.H.

*Assistant Director of Health
Services,*

F. S. PARNEY, M.D.

Chief, Blindness Control Division,

J. H. GROVE, M.D.

*Chief, Child and Maternal Health
Division,*

ERNEST COUTURE, M.D., C.M.

*Chief, Civil Aviation Medicine
Division,*

H. E. WILSON, M.D.

Chief, Civil Service Health Division,

R. G. RATZ, M.B.

Chief, Dental Health Division,

H. K. BROWN, D.D.S., D.D.P.H.

Chief, Epidemiology Division,

A. F. W. PEART, M.B.E., M.D.,
C.M., D.P.H.

Chief, Hospital Design Division,

H. G. HUGHES, B.Arch., A.R.I.B.A.,
M.R.A.I.C.

Chief, Industrial Health Division,

K. C. CHARRON, M.D.

*Chief, Industrial Health Labora-
tory,*

K. KAY, M.A., Ph.D.

Chief, Laboratory of Hygiene,

J. GIBBARD, B.S.A., M.Sc.

Chief, Mental Health Division,

C. G. STOGDILL, M.A., M.D.

Chief, Narcotic Control Division,

K. C. HOSSICK.

Chief, Nutrition Division,

L. B. PETT, B.S.A., M.A., Ph.D.,
M.D., F.C.I.C.

*Chief, Public Health Engineering
Division,*

J. R. MENZIES, B.A.Sc., O.L.S., C.E.

*Chief, Quarantine, Immigration
Medical and Sick Mariners
Services,*

H. D. REID, M.D.

*Chief, Tuberculosis and Venereal
Disease Control Division,*

B. D. B. LAYTON, M.D.

Director of Health Insurance Studies,

F. W. JACKSON, M.D., D.P.H.

*Assistant Directors of Health Insur-
ance Studies,*

M. LANGLOIS, M.D.,

G. E. WRIDE, M.D., D.P.H.

Director, Food and Drug Divisions,

C. A. MORRELL, M.A., Ph.D.,
F.R.S.C.

*Assistant Director, Food and Drug
Divisions,*

A. PAPINEAU-COUTURE, B.A.

Chief, Inspection Services,

R. D. WHITMORE, O.B.E., F.C.I.C.

Chief, Laboratory Services,

L. I. PUGSLEY, B.A., M.Sc., Ph.D.

*Chief, Proprietary or Patent Medi-
cines Division,*

L. P. TEEVENS.

Director, Indian Health Services,

P. E. MOORE, M.D., D.P.H.

*Assistant Directors, Indian Health
Services,*

H. A. PROCTOR, M.D.

O. LEROUX, M.D.

WELFARE BRANCH

*National Director of Family
Allowances,*
R. B. CURRY, B.A., LLB.

*Director, Old Age Pensions
Division,*
J. W. MACFARLANE.

Executive Assistant (Welfare),
Mrs. D. B. SINCLAIR, O.B.E., B.A.,
M.A., LL.D.

National Director of Physical Fitness,
ERNEST LEE, B.A., B.Sc., in P.E.

ADMINISTRATION BRANCH

Departmental Secretary,
Miss O. J. WATERS.

*Director, Information Services
Division,*
C. W. GILCHRIST, O.B.E., E.D.

Departmental Librarian,
Miss M. D. MORTON, B.H.Sc.,
B.L.S.

*Executive Assistant (Personnel, Pur-
chasing and Supply),*
J. C. RUTLEDGE, B.Com.

Legal Adviser,
R. E. CURRAN, K.C., B.A., LL.B.

Chief, Research Division,
J. W. WILLARD, M.A., M.P.A., A.M.

Chief, Translation Office,
G. A. SAUVE.

Chief Treasury Officer,
T. F. PHILLIPS.

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS

ADMINISTRATIVE OFFICES

Ottawa—Jackson Building, Bank and Slater Streets.

FAMILY ALLOWANCES REGIONAL OFFICES

St. John's—29 Buckmasters' Field.

Charlottetown—59 Queen Street

Halifax—Industrial Building

Fredericton—City Hall

Quebec—51 Boulevard des Capucins

Toronto—122 Front Street West

Winnipeg—Lindsay Building

Regina—Saskatchewan Motors Building, Broad Street

Edmonton—10201, 100th Street

Victoria—Weiler Building

FOOD AND DRUG LABORATORIES

Ottawa—35 John Street

Halifax—Dominion Public Building (P.O. Box 605)

Montreal—379 Common Street

Toronto—65 Victoria Street

Winnipeg—Aragon Building, 244 Smith Street

Vancouver—Federal Building, 325 Granville Street

IMMIGRATION MEDICAL SERVICE OFFICES

Canada

Gander—Gander Airport

Halifax—Immigration Building, Pier 21

North Sydney—Immigration Building

Saint John—Quarantine Hospital (P.O. Box 1406)

Quebec—Savard Park Immigration Hospital

Montreal—Immigration Building, 1162 St. Antoine Street

Victoria—Immigration Building

Overseas

London—42-46 Weymouth Street, Marylebone, W.1

The Hague—Canadian Embassy

Brussels—Canadian Embassy

Paris—Canadian Embassy

Rome—Canadian Embassy

INDIAN HEALTH SERVICES

Hospitals

Prince Rupert, B.C.—Miller Bay Indian Hospital

Nanaimo, B.C.—Nanaimo Indian Hospital

Sardis, B.C.—Coqualeetza Indian Hospital

Morley, Alta.—Stoney Indian Hospital

*Cardston, Alta.—Blood Indian Hospital

Brocket, Alta.—Peigan Indian Hospital

Gleichen, Alta.—Blackfoot Indian Hospital

Edmonton, Alta.—Charles Camsell Indian Hospital

Fort Qu'Appelle, Sask.—Fort Qu'Appelle Indian Hospital

North Battleford, Sask.—North Battleford Indian Hospital

Hodgson, Man.—Fisher River Indian Hospital

Pine Falls, Man.—Fort Alexander Indian Hospital

†Selkirk, Man.—Dynevour Indian Hospital

†The Pas, Man.—Clearwater Lake Indian Hospital

†Brandon, Man.—Brandon Indian Hospital

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS—Continued

Norway House, Man.—Norway House Indian Hospital
 Fort William, Ont.—Squaw Bay Indian Hospital.
 Manitowaning, Ont.—Manitowaning Indian Hospital
 Moose Factory, Ont.—Moose Factory Indian Hospital
 Oshweken, Ont.—Lady Willingdon Indian Hospital
 Sioux Lookout, Ont.—Sioux Lookout Indian Hospital
 *Perth, N.B.—Tobique Indian Hospital

Nursing Stations

Coppermine, N.W.T.	Oxford House, Man.
Fort Good Hope, N.W.T.	Nelson House, Man.
Fort McPherson, N.W.T.	Little Saskatchewan (Gypsumville), Man.
Fort Norman, N.W.T.	Cross Lake, Man.
Lake Harbour, N.W.T.	Big Trout Lake, Ont.
Port Simpson, B.C.	Osnaburgh House, Ont.
Driftpile, Alta.	Lac Seul, Ont.
Saddle Lake, Alta.	Fort Chimo, Que.
Lac la Ronge, Sask.	Fort George, Que.
Broadview, Sask.	Bersimis, Que.
God's Lake, Man.	Port Harrison, Que.
Island Lake, Man.	Eskasoni, N.S.

Health Centres

Sydney, N.S.	Sandy Bay, Man.
Shubenacadie, N.S.	Rosburn, Man.
Lennox Island, P.E.I.	Punnichy, Sask.
Kingsclear, N.B.	Prince Albert, Sask.
Newcastle, N.B.	Fort St. James, B.C.
Seven Islands, Que.	Williams Lake, B.C.
Caughnawaga, Que.	Kamloops, B.C.
Maniwaki, Que.	Hazelton, B.C.
Barriere (seasonal)	New Westminster, B.C.
Notre Dame du Nord, Que.	Duncan, B.C.
Amos, Que.	Alert Bay, B.C.
Obidjiwan (seasonal)	Kincolith, B.C.
Mistassini (seasonal)	Port Simpson, B.C.
Maniwan (seasonal)	Port Edward, B.C.
Waswanipi (seasonal)	Vancouver, B.C.
Point Bleue, Que.	Whitehorse, Y.T.
St. Regis, Que.	Carmacks (seasonal)
Deseronto, Ont.	Teslin (seasonal)
Muncey, Ont.	Fort Smith, N.W.T.
Sarnia, Ont.	Fort Resolution, N.W.T.
Oshweken, Ont.	Fort Simpson, N.W.T.
Christian Island, Ont.	Aklavik, N.W.T.
Chapleau, Ont.	Chesterfield Inlet, N.W.T.
Port Arthur, Ont.	Pangnirtung, Baffin Island
The Pas, Man.	Winnipeg, Man.

*Departmental hospitals staffed by religious orders on stipend.

†Departmental sanatoria staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

INDUSTRIAL HEALTH LABORATORY

Ottawa—200 Kent Street

LABORATORIES OF HYGIENE

Ottawa—45 Spencer Street

Kamloops, B.C.

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS—*Concluded*

PUBLIC HEALTH ENGINEERING DISTRICT OFFICES

Moncton—General Motors Building
Montreal—1162 St. Antoine Street
St. Catharines—4th Floor, Dominion Building
Port Arthur—Room 1, Customs Building
Winnipeg—207 Scientific Building, 425½ Portage Avenue
Edmonton—Room 302, Alberta-Jasper Building
Vancouver—321 Federal Building, 325 Granville Street

QUARANTINE STATIONS

Halifax—Rockhead Hospital
Saint John—Quarantine Hospital (P.O. Box 1406)
Quebec—Louise Basin and Savard Park Immigration Hospital
Montreal—379 Common Street
Vancouver—Immigration Building
Victoria—William Head, B.C.

SICK MARINERS CLINICS AND HOSPITALS

Halifax—Immigration Building, Pier 21
Sydney—Marine Hospital
Lunenburg—Marine Hospital
Saint John—Quarantine Hospital
Quebec—Louise Basin
Vancouver—Immigration Building

*To the Honourable Paul Martin, K.C., P.C., M.P., M.A., L.L.M., LL.D.,
Minister of National Health and Welfare, Ottawa.*

SIR,—We have the honour to present, herewith, the Annual Report of the Department of National Health and Welfare, for the fiscal year ended March 31, 1950.

Respectfully Submitted,

G. D. W. Cameron,
*Deputy Minister of National Health
and Welfare (Health)*

G. F. Davidson,
*Deputy Minister of National Health
and Welfare (Welfare)*

OTTAWA,
April 1, 1950.

INTRODUCTION

With increasingly effective co-operation between all the agencies in these fields, new ways were found and additional measures were adopted, this year, further to ensure the health and to promote the general well-being of the people of Canada.

Vigilant watch was kept against possible threats to the public health, means for raising the national health standard were explored and provisions for the benefit of children, the aged and the handicapped helped to maintain a generally high level of social security.

As federal, provincial, local and voluntary services combined to provide wider and better-equipped health and welfare facilities, advances were made and promising projects were initiated.

Federal Grants

Grants provided to the provinces under the National Health Program, to strengthen their health facilities and to develop their services, in preparation for the possible introduction of a nation-wide medical care and hospitalization plan, have enabled the provinces steadily to increase their hospital accommodation and extend their activities. The National Health Program was providing more than \$33,000,000 annually in the general plan to improve the country's capacity for seeking out and treating illness.

Although the Program had been in operation less than two years, more than half of the goal of 40,000 new hospital beds, which it had been hoped could be provided within five years through these measures, had already been reached by the end of this fiscal year, and the country's health facilities had been strengthened immeasurably.

Surveys which the provinces had carried out, preparatory to making use of federal and provincial grants to strengthen health services, have added to the fund of information essential to sound health planning. As these surveys revealed the extent to which government agencies were meeting needs, and what and where new effort was required, plans were laid for a nation-wide sickness survey of thousands of families, to obtain an intimate picture of the incidence and prevalence of morbidity. This survey will be conducted in 1950, jointly by federal and provincial health authorities and the Dominion Bureau of Statistics.

International Interests

While working to protect the health and welfare of her own people, Canada, through the Department of National Health and Welfare, continued to play a major role in United Nations health and welfare organizations and to co-operate actively with international control bodies in these fields.

The Minister of National Health and Welfare was a Member of the Canadian Delegation to the 1949 General Assembly of the United Nations.

The Deputy Minister of National Health and Welfare (Health) headed the Canadian delegation to the Second World Health Assembly, held in Rome in June, 1949. Canadian delegates to meetings of the World Health Organization stressed the desirability of a program which would be most likely to assure the greatest returns for expenditures involved. They urged the provision of the type of assistance which would most readily enable countries to develop, and assume full responsibility for, their own health services as quickly as possible rather than continue to rely upon the support of the Organization.

The Deputy Minister of National Health and Welfare (Welfare) was Alternate Delegate to the Tenth Session of the Economic and Social Council, and Canadian representative on the Social Commission, and also attended meetings of the Fourth Session, in May 1949. He was represented at the Fifth Session, in December, by the National Director of Family Allowances. The Executive Assistant (Welfare) was Canada's representative to the United Nations International Children's Emergency Fund.

HEALTH BRANCH

There were no major epidemics during the year, and some improvement in the general health picture was indicated in reports correlated by the Dominion Bureau of Statistics.

The birth rate in Canada in 1949 was 26·9 per 1,000 population, a decrease from the high rate of 28·6 in 1947 and from 27·0 in 1948. The death and marriage rates also decreased, both being 9·2 in 1949, compared with 9·3 and 9·6 in 1948.

Canada's maternal mortality rate remained at 1·5 per 1,000 live births—comparing favourably with rates of other countries—but a continuing infant mortality rate of 44 per 1,000 live births, which was higher than the rates of 11 other countries and double those of two of them, continued to cause concern.

The Dominion Bureau of Statistics reported that, among the causes of death that affect mainly children and young adults, there were declines from the previous year in diphtheria and measles, but increases in mortality from whooping cough, acute poliomyelitis and diarrhoea and enteritis. The tuberculosis rate declined from 37·1 in 1948 to 30·5 in 1949; deaths from scarlet fever totalled 14, as compared with 38 in the previous year; deaths from motor accidents increased from 2,070 in 1948 to 2,223, and other accidental deaths from 5,722 to 5,803.

Among the causes which affect mainly older people, the cancer death rate decreased from 126·4 per 100,000 population in 1948 to 124·7, while the cardiovascular group of diseases, amounting to over 54,700, or about 45 per cent of all deaths, in 1949, accounted for an increased rate of 415·3 in 1949, as compared with 414·0 in 1948.

Looking back over half a century of health progress in Canada, public health authorities noted that there had been a 20-year increase in the average life expectancy in that period, a reduction of one third in the general mortality rate and very definite progress in medical science and in the application of new knowledge.

Although it was still far from satisfactory, the infant mortality rate had been cut 50 per cent in half a century and the maternal mortality rate had been reduced in that period by 60 per cent.

Events of the Year

Among outstanding events of the year were several which promised continued improvement in health conditions.

Immigration medical provisions forestalled possible introduction of disease from abroad, notably following an outbreak of smallpox in Scotland at the end of the fiscal year.

Federal health services, including the department's Quarantine, Immigration Medical and Sick Mariners services, Food and Drug control and Public Health Engineering supervision, were extended to the new province of Newfoundland.

The department's facilities for ensuring the health of native peoples were expanded and Indian Health Services opened the 21st of its chain of hospitals.

Research was carried on relating to the manufacture and use of such new compounds as cortisone, used experimentally, and possibly holding out promise in the treatment of many hitherto difficult diseases.

In the industrial health field a program was initiated to meet potential hazards created by the increased use of radio-active materials and radiation-producing apparatus.

The National Cancer Institute of Canada was provided with facilities at the Laboratory of Hygiene for a Tumour Registry, which will serve as a clearing house of information concerning malignant growths.

Plans were made, also, for new quarters for services of the Laboratory of Hygiene, both at Ottawa and at the Western Branch. Facilities for the study of the virus diseases will be available when a new building is erected for this purpose at the Capital, and the Western Branch, now working at Kamloops, B.C., on virus infections and rodent plagues of particular concern to Western Canada, will have more suitable laboratory facilities at Edmonton, Alta., where a lease has been signed with the University of Alberta for a site on the campus.

In connection with the observance of the 75th anniversary of the passage of Canada's first food and drug regulations, public attention was focused on federal services ensuring the safety of food, drugs and pharmaceuticals. New pharmaceutical products were checked closely and, with the co-operation of manufacturers, reasonable marketing of such preparations as the antihistamines was achieved.

An active health education campaign was carried out, with and through provincial and other authorities, and, in co-operation with United States agencies, a motion picture was made on cancer.

Health Expenditures

Widespread expansion of services for Indians and Eskimos accounted for by far the greatest single expenditure in federal health operations. The overall cost of the Health Branch, including health grants of all kinds, was \$29,690,330.48. This was made up of: Grants, \$15,878,007.07; Statutory Health Services, \$12,857,023.87; Co-operative services with the Provinces, \$955,299.54. Of the \$12,857,023.87 for statutory functions \$9,924,124.00 was for Indian Health work.

Costs of other basic health services were: Health Branch administration, \$101,549.35; Food and Drugs, \$654,078.46; Proprietary or Patent Medicines, \$25,015.70; Narcotics, \$139,698.77; Quarantine and Leprosy, \$262,485.29; Sick Mariners, \$580.138.02; Immigration Medical, \$807,642.52; Public Health Engineering, \$128,105.88; Civil Aviation Medicine, \$35,490.29, and Civil Service Health, \$198,695.59.

Expenditures on services working with and through the provinces were: Laboratory of Hygiene, \$343,672.05; Child and Maternal Health, \$74,702.39; Industrial Health, \$116,936.27; Nutrition, \$128,268.80; Venereal Disease Control, \$35,387.18; Dental Health, \$45,733.11; Hospital Design, \$18,890.77; Mental Health, \$86,080.34; Blindness Control, \$27,520.67; Epidemiology, \$22,010.63 and Health Insurance Studies, \$56,097.33.

In addition to \$15,728,907.07 made available to the provinces under terms of the National Health Program, grants of \$146,500 were made to associations and societies in the health field and of \$2,600 to Sailors' Hostels.

Close Co-ordination

Through meetings of the DOMINION COUNCIL OF HEALTH and of several technical committees consisting of representatives of federal and provincial departments, close co-ordination of the respective activities of each was

achieved and unnecessary duplication and overlapping avoided. Many co-operative undertakings were planned and initiated and, where desirable, uniform standards and methods were evolved for adoption by all provinces.

During the year the DOMINION COUNCIL OF HEALTH held its 57th meeting. One of the major problems on the agenda was the crucial nurse shortage and the Council agreed on a number of measures to be taken to relieve the situation, including the expansion of provincial programs for training nursing assistants.

A uniform pattern for ensuring the safety of individuals working with radio-active materials was adopted, and arrangements were concluded for the national sickness survey to be carried out by the provinces in co-operation with the department and the Dominion Bureau of Statistics.

Technical committees which met during the year included, the Advisory Committee on Public Health Laboratory Services, the Advisory Committee on Mental Health, the Canadian Council on Nutrition, the Provincial Health Survey Directors and, for the first time, a Dominion-Provincial conference on Public Health Engineering was held. Meetings of these technical groups and recommendations arising therefrom were correlated by the DOMINION COUNCIL OF HEALTH.

HEALTH SERVICES

BLINDNESS CONTROL

Results were apparent this year from the Blindness Control Division's activities in advising provincial health authorities regarding measures for the conservation of sight. Provincial projects submitted for grants under the National Health program included provision for a glaucoma research clinic at the University of Toronto and projects are also under way to ascertain the causes of blindness in children and to determine the best way of testing the vision of school pupils. Equipment for testing children's vision has been purchased in Manitoba and other projects are planned.

As an outcome of these studies it is hoped that provincial authorities will be able to extend their public health services for the preservation of vision. This field has been largely untouched and offers great scope for further endeavour directed to the prevention of blindness and to the improvement of lighting and eye-safety factors in industry.

So far, only Nova Scotia, New Brunswick and Quebec have participated in a joint treatment experiment, under which the federal government pays 75 per cent of the cost, to ascertain what percentage of blind pensioners could have useful sight restored by remedial treatment. Some 50 cataract operations have been performed and successful visual results obtained in about half these cases have made it possible to remove those helped from pension rolls.

Since 25 per cent of blindness is due to cataract, and this experiment proves that useful vision can be restored in at least half the cases treated, it appears that not fewer than 12 per cent of the pensions now paid could be discontinued if treatment for suitable cases was made obligatory at time of application for pension.

More blindness could be prevented throughout Canada if the public were better informed and if adequate preventive treatment facilities were available, particularly in rural areas. The Blindness Control Division, since its creation, has sought to make the facts concerning sight and its preservation more widely known and, in collaboration with the department's Information Services Division, has prepared and distributed widely numbers of pamphlets intelligible to the layman.

However, there are not enough oculists in Canada to provide adequate eye services. Too, since oculists tend to congregate in the larger centres, proper eye care cannot be obtained in most rural areas. There are no eye hospitals in Canada. It is considered that at least two hospitals are needed, where difficult eye cases could be treated and an adequate number of oculists trained. The present eye treatment facilities and the number of practising oculists would be entirely inadequate to meet the needs of any comprehensive health insurance scheme.

Blind Pensions

In the administration of blind pensions, the division continued to arrange, this year, for eye examinations of all applicants for such pensions, making rulings as to visual eligibility and issuing the necessary certificates.

Of 2,791 applications for blind pension considered, 1,747, including 198 in Newfoundland, were approved. The total number of blind pensioners at March 31, 1950 was 10,517, or approximately 62 per cent of the more than 17,000 known blind in Canada. The 5,000 not on pension are debarred because

they are under 21 years of age, because they have incomes sufficiently high to exclude them from these benefits, or because they have not lived in Canada for 20 years.

The percentage of blind pensioners is highest in the Maritimes and in Quebec, and is fairly constant at a considerably lower level in the rest of Canada. The percentages of pensioners to total population are as follows: New Brunswick, .204; Nova Scotia, .142; Prince Edward Island, .126; Quebec, .097; Manitoba, .067; British Columbia .055; Saskatchewan, .055; Alberta, .052, and Ontario, .051.

In the provinces where the percentage of persons on blind pension is highest, the greatest increases occur mainly in certain rural areas where living conditions are poor and educational standards low. Too many of the blind, in these areas, are the issue of first-cousin marriages, thus perpetuating hereditary diseases, and there is a general lack of infusion of new blood stock. Medical facilities, also, are inadequate and preventive measures against blindness are almost entirely lacking.

In these areas, the people are quite "pension conscious". More than half the applicants for pension there are found to be visually ineligible. Most of them just need proper glasses. About 30 per cent of the applicants malingers, making it difficult for the oculists to determine their true visual acuity. The fact that the legal definition of blindness is very generous adds to the difficulty of weeding out malingerers and borderline cases.

Conditions like cataract, glaucoma, myopia and constitutional diseases affecting the sight are no respecters of persons. The better educated and more prosperous individuals affected tend, however, to demand and to receive appropriate medical care.

CHILD AND MATERNAL HEALTH

Through educational, consultative and other efforts, as well as by participation in demonstrations and surveys, the Child and Maternal Health Division continued to work with the provinces and other agencies in the constant fight to improve Canada's child and maternal health picture.

While progress in this field, according to the latest reliable statistics, was not spectacular, the general expansion of health services under inspiration of the National Health Program gave rise to hope for steady improvement, and the efforts of all were directed to finding new ways and means of saving more infant lives and making maternity safer.

The Infant Situation

In 1948, the latest year for which exact figures are available, 347,307 babies were born alive in Canada. The number of live births has increased from year to year, there having been 117,839 more live births in 1948 than in 1939. This increase emphasized the urgency of strengthening efforts to lower infant mortality.

In 1948, the nation's loss in babies under one year was 15,164, a rate of 44 per 1,000 live births.

Although the following comparison with rates of other countries must necessarily be qualified by consideration of certain adverse factors in Canada, it is important as setting an objective for this country. (Unequal distribution of medical, nursing and hospital services and a combination of such factors

as climatic conditions and sparsity of population, with many mothers living in rural areas remote from proper facilities, all had a bearing on the Canadian rate).

Infant Mortality Rates (per 1,000 live births)—1948

New Zealand	22	England and Wales	34
Iceland	22 (1947)	Norway	35 (1947)
Sweden	23	Denmark	35
Australia	28	Switzerland	36
Netherlands	29	Union of South Africa	
United States	32	(whites)	37
		Canada	44

Thus, Canada's rate was double that of the lowest rates—those of New Zealand and Iceland—and higher than those of nine other countries.

One province had a rate as high as 61; another as low as 33. The lowest provincial rate was still approximately 50 per cent higher than the national rates for New Zealand and Iceland, and almost on a par with the national rates of the United States and England and Wales. It was evident, therefore, that Canada's national rate is excessive.

Causes of death

More than 50 per cent of infant deaths in Canada occur during the first month of life—8,897 out of 15,164, in 1948. This indicated that the care of mothers during pregnancy should receive prime attention, as most infant deaths were due to conditions which had their origin before the birth of the baby.

For instance, the leading cause of infant mortality was prematurity—3,890 in 1948, or 25 per cent of all infant deaths.

It is hoped that the interest manifested recently in the matter of premature births, as shown by the fact that two provinces have made provision for incubators for hospitals, on a province-wide scale, and that one is developing human milk banks for the care of prematures, will have a definite effect in reducing the toll from prematurity.

Respiratory diseases were responsible for the next highest number of infant deaths—2,622 in 1948. These included pneumonia, influenza and bronchitis. Congenital malformations accounted for the third largest number of baby deaths—1,987; diarrhoea and enteritis caused 1,472 infant deaths, and injury at birth brought death to 1,446 infants.

Paediatric specialists of the Canadian Medical Association are on record as recommending breast feeding as first choice in the care of infants, it having been demonstrated that babies fed on mother's milk react more favourably in regard to diarrhoea and enteritis in the newborn than babies fed on formulas.

Those five causes—prematurity, respiratory diseases, congenital malformations, diarrhoea and enteritis and injury at birth—took 11,417 babies out of a total of 15,164 who died before their first birthday, or 75 per cent.

Also to be considered was the fact that there were 6,879 stillborn babies in 1948.

Statistics are not available to give a clear picture concerning morbidity, but surveys carried out in Canada revealed that a large proportion of children reached school age showing defects which might have been prevented if proper attention had been given during the first few years of life. Also, among school-age children, the incidence of morbidity was very high, particularly with respect to nutrition. There is good reason, however, to expect improvement in this situation, in view of special interest now being given to perfecting school medical services.

Maternal Situation

Out of 347,307 live births, in 1948, there were 510 maternal deaths—a rate of 1.5 per 1,000 live births.

This rate is considered creditable, in view of adverse conditions in many sections of the country. Canada's maternal mortality rate compares favourably with other countries. However, since 72 per cent of the maternal deaths were due to such conditions as toxæmia, hæmorrhage and sepsis, still further improvement is possible.

One of the provinces is investigating factors associated with maternal mortality. Results of this study should go a long way in locating the weak spots and in directing efforts along effective lines. If adopted all over Canada, measures which may be suggested by this study could result not only in reducing mortality among mothers, but in decreasing morbidity and improving the infant situation.

Some of the improvement in the maternal situation was undoubtedly due to increase in hospitalization for childbirth. During ten years, the percentage of confinements in hospitals rose from 41 in 1939 to 72 in 1948. With hospitals providing more available service in emergency, the risk to mothers taking advantage of such facilities has been reduced to a minimum.

There has been a close relationship between the rate of hospitalization in the various centres and the rate of maternal deaths; the higher the percentage of births in hospitals, the lower the rate of fatal accidents to mothers. Federal grants have resulted in facilitating hospitalization, through adding beds to hospitals and perfecting maternity services in them. They have also contributed through providing special training for personnel engaged in obstetrical fields.

Another problem has been morbidity in mothers following childbirth, although it has been gratifying to note the greater interest being taken in recent years in the postnatal condition of mothers.

In this field, a project has been initiated under the National Health Program for the study of special conditions in mothers following early rising after childbirth. Another project involves the study of prenatal conditions in mothers who have given birth to a premature baby. Here, again, it is possible that common factors may be found which can bring about a reduction in the incidence of prematurity.

Health Grants

Benefits which may be expected in the child and maternal health field from federal grants are indicated in measures initiated since the program was launched. Two provinces have established Child and Maternal Health divisions, bringing to four the number of such provincial agencies. Two provinces provided incubators on a province-wide scale, one of them to all hospitals having an obstetric service, the other to all hospitals of 50 or more beds. One province established and equipped three centres for prenatal and postnatal clinics.

A new project furnished equipment for chest x-ray of all mothers attending a prenatal clinic; another provided x-ray equipment for a study of 2,000 cases to determine pelvic sufficiency (pelvic angles or conformation of the pelvis).

A demonstration clinic, prenatal and postnatal, has been established for teaching purposes. Another project concerns the study of effects of early rising after childbirth. Appointments have been made of nurses trained in obstetrics, for hospital service as well as for field work, giving home and clinic instruction, and public health centres have been established to improve prenatal and post-

natal care, including nutrition. Funds have been made available to provide assistance to medical and nursing staffs in school health programs, taking and recording heights and weights, testing vision, etc.

One province has set up a Crippled Children's division and another provides treatment and rehabilitation of crippled children on a province-wide scale. To be used as a national centre for the training of technicians as well as treatment, a centre for cerebral palsy cases has been established.

In addition, three provinces have projects concerning the registration of crippled children and others have set up centres for the treatment of such handicapped little ones. Two projects have provided equipment for the making of appliances, including the training of brace makers, and five projects have been launched to provide equipment for the treatment of crippled children in the orthopaedic section of hospitals.

Other projects provide treatment, rehabilitation and appliances for polio cases, on a province-wide scale and still another makes available mobile units for remote areas. The federal funds have also made possible the transportation of children from homes to clinics for treatment, and the study of rheumatoid arthritis conditions in children, covering diagnosis, treatment and services.

Activities

The Child and Maternal Health Division engaged in an active drive, in co-operation with other agencies, to reduce child and maternal mortality and morbidity and employed all media for enlisting the public's support.

The division assisted the Directorate of Health Insurance Studies in respect to administration of the National Health Grants, such as those for Crippled Children's work and the Public Health Grant where it related to maternal and child health.

Wide distribution was maintained of the book *The Canadian Mother and Child*—approximately 10,000 copies being sent out each month. Copies were sent on request as far afield as New Zealand, British West Africa, India, England, Ireland, Belgium, Switzerland, Czechoslovakia, Syria and Turkey. The French edition of the book was brought into line with the English copy, which was revised to some extent last year.

More than 111,000 copies of the card *Daily Diet for Mothers*, which continued to assist medical practitioners, public health nurses and clinics, were distributed this year.

The Director reviewed the French text of *Up the Years—the Child from One to Six* and material for departmental radio plays dealing with child and maternal health, while the folders on *Poliomyelitis* and *Ten Points to Remember* were revised.

Talks were given to students at the University of Ottawa and University of Montreal and to visiting nurses from the Carleton County Health Unit.

The Director attended the annual meeting of the Canadian Medical Association at Saskatoon, and took part in a round-table conference on breast feeding, later preparing an article for publication on this subject.

The Director also attended a meeting in Washington concerning the definition of "live birth" and "still birth", and took part in the first annual meeting of the Canadian Foundation for Polomyelitis. He also attended the annual meeting in Montreal of the Canadian Council for Crippled Children.

Consultations held during the year included discussions with the Director of the Section on Public Health Administration of the School of Hygiene, Toronto, with the Deputy Medical Officer of Health, Toronto, concerning school medical examinations and the carrying out of services among school children with regard to growth and development, and with British Columbia health authorities concerning the final report on Wetzel Grid studies.

The Nursing Consultant visited hospital training schools in Montreal and Quebec, participating in discussions there. She attended the annual meetings of the Registered Nurses' Association of the Province of Quebec, and of the Canadian Public Health Association at Halifax, visiting nursing services in New Brunswick on the latter occasion.

The Nursing Consultant co-operated with the Metropolitan Health Committee, Vancouver, in a study of premature births. This had to do with 200 mothers of premature babies, the intention being to discover, if possible, if there were factors common to such cases, in the hope that such information might prove valuable in efforts to lower the incidence of premature birth.

Statistics concerning child and maternal mortality in Canada in the period 1926 to 1948 inclusive, will be found in Table 1, page 112.

CIVIL AVIATION MEDICINE

Activities of the Civil Aviation Medicine Division made distinct contributions again this year to the establishment and maintenance in Canada of sound health and safety factors in relation to flying.

Several projects were initiated in the division's capacity as adviser to the Air Services Branch of the Department of Transport. Physical standard requirements were established and administered for the Superintendent of Air Regulations of that department, as the division continued to report upon the physical fitness of all types of pilots for civil flying licences.

While administering the pilot medical examination service for the Air Regulations Section, the division advised the Department of Transport generally, and more specifically its Civil Aviation Division, on such matters as related to passenger and aircrew safety, comfort and health; it advised airline or non-scheduled operators on problems relating to the physical fitness of their crews as well as on phases of operations affecting the welfare of passengers and crew; it represented Canada at international aviation meetings and it initiated research, for study by the Defence Research Board and the Royal Canadian Air Force Institute of Aviation Medicine, in projects directed towards improving conditions of flight.

Aviation Medicine Training

Two groups of approximately 30 physicians each, appointed by the Department of Transport as Civil Aviation Medical Examiners, were given a six-day course in Civil Aviation Medicine at the R.C.A.F. Institute of Aviation Medicine in Toronto.

The curriculum was about equally divided between the theory and physiology of aviation medicine, on the one hand, and the practical application of this specialty in regard to pilot examination, crash investigation and indoctrination of pilots and the public on the other.

Lecturers and demonstrations were supplied equally by the R.C.A.F., either Regular Force or Reserve, and by the special consultants of this division.

The object of this training was to give these examiners a broad concept of the scope of aviation medicine, some idea of the part it plays in safe air operations and, more important, to assure a more discerning assessment of pilot physical disabilities in relation to flight duties.

Regional Consultant Boards

Authority was granted in May to establish Regional Medical Consultant Boards in seven cities across the country, the function of these boards being

to provide specialist advice to the Civil Aviation Division on borderline cases of physical disabilities thought incapable of entirely equitable assessment at headquarters.

Since the majority of cases appearing before regional specialists are expected to concern older pilots in whom a gradually-increasing physical defect has been reported, and whose whole economy is based on their fitness to continue flying, most painstaking investigation and assessment will be made, in the interest of all concerned.

Audiometric Survey

Because it has become apparent, over the past two years, that there is an inordinately high incidence of deafness among pilots holding the higher level types of licences, and since this may conceivably be due to the vibration or noise, or both, to which the pilot is subjected, a survey by pure tone audiometric screening of all airline transport and commercial pilots was initiated by the division.

Where possible, use is to be made of previous R.C.A.F. audiometric records, and the approach of studying present hearing ability against the background of professional flying careers is hoped to build up a framework around which practical and realistic standards of hearing for commercial and airline transport pilots may be evolved.

Airport Emergency Procedures

The division was requested by the major airline operators and the Department of Transport to co-ordinate efforts of various agencies which would be called upon to act in a major airport disaster. The Canadian Red Cross signified willingness to participate in the development of this scheme and the program was advanced to the stage where a final pattern of procedure for all the larger controlled airports could be drawn up.

Statistics

Scope of the division's activities during the year is indicated by the following statistics.

Total medical assessments	8,983
Applicants rejected—	
— eye	40
— colour perception	55
— ear	4
— cardiovascular	15
— others	26
Total medical assessments for applicants for Air Cadet Scholarship Flying Training	213
Total electrocardiograms screened	903
Specialist examinations for licence issue	143
Flight tests	14
Licence limitations recommended	16
Audiometric recordings	138
New examiners appointed	26

CIVIL SERVICE HEALTH

Consolidation and integration seem to have been the keynote of the Civil Service Health Division during the past year, rather than significant new developments. So gradual and quiet has been the process that it is only in retrospect that it is possible to appreciate the progress that has been made, not only in the integration of the various phases of the service into a harmonious, well-rounded whole, but of the division into the department, the government service, the community health and welfare programs, and the various allied professions.

Within the division there has grown a mutual understanding and reliance which enables each to function freely within his own area of competency, and yet in good co-operation with the efforts of others and the total service of the division. There have been many evidences of this development in the handling of employee problems, in the attitudes of staff members, and in administrative planning.

The Health Centre continues to provide a clinical diagnostic and advisory service of a high standard. It enjoys the confidence and co-operation of the medical profession, and it is gratifying to note the increase in frequency with which senior civil servants avail themselves of its facilities for periodic examination and advice on specific health problems. The resultant conservation of health and efficiency is difficult to measure but must be considerable.

In addition to the Health Centre, the division now has fourteen Health Units serving approximately 15,000 employees. Visits to these Health Units average about 9,000 per month. In only two per cent of cases is the employee sent home or not returned to his duties after simple treatment or a brief period of rest.

The quality of this service is gaining recognition from local medical, nursing, and social groups, with whom harmonious relationships have been established. Several of the universities have expressed approval of the service by requesting field work for their public health nursing students. The comments of national and international professional visitors indicate that this health and welfare service for federal employees compares favourably with other industrial and government health services, is an economic and intelligent use of health personnel, and is a worthy segment of the total plan for Canada's health.

The psychological service is now carrying a full work load and the division has received many expressions of appreciation from personnel staff for valuable advice and assistance in personnel and placement problems. The psychologist is concerned primarily with human behaviour. His function is to assist civil servants to more intelligent self-direction and to a better understanding of their personalities, aptitudes, attitudes, and interests in their job relationships. To those with physical, mental, emotional, and social handicaps, he offers help in making the most of these handicaps in the struggle of earning a living. To those who over-estimate or under-estimate their personality and vocational possibilities, he offers guidance for a more realistic approach to job and life adjustment. He reports in part: "It has been most gratifying to note the continual growth in counselling skills and techniques shown by the Nursing Counsellors in the field of personal relationships. Many cases well within the scope of the Nursing Counsellor formerly referred to me are now being handled by the Nursing Counsellors."

In one out of every seven visits to a health unit, some form of social service is required. The reason for the visit may be the discussion of personal health, but the major precipitating or contributing factor is, in those cases, a mental or social one requiring special service. Supplementary anal-

ysis of services maintained since May, 1949, shows a steady increase in these special cases. This increase is partially due to the increasing volume of visits to the Health Units, but it also reflects the growing confidence of employees which prompts them to discuss their personal and family problems and requires a considerable increase in the health teaching and counselling being done by the Nursing Counsellors.

The proportion of females requiring such service is only slightly higher than that for males. Nutritional problems, serious handicaps, mental health, and family health, are the most important causes numerically and it is of interest to note that, in the division's experience, alcoholism and immoral conduct are not significant problems.

There has been some reorganization of the Certificate Review Section which is resulting in more economical use of the time of the professional staff. It is hoped that it will also result in a more satisfactory and expeditious reporting service to employing departments.

During the year selected members of the divisional staff have been called upon for special advisory service of both departmental and interdepartmental nature to such an extent as to cause some embarrassment in administration. Unless these demands become more frequent or more onerous, however, no immediate staff changes are expected.

Considerable progress has been made in the interpretation of the division's functions to employees and administrative staff. There still remains, however, much scope for education of junior and intermediate supervisors in the intelligent use of a modern health service and for the simplification of re-assignment when unsuitable employment is discovered to be the cause of deterioration in health or efficiency.

Summary of Services Rendered

(a) *Health Units*

At the close of the fiscal year ending March 31, 1949, 12 Health Units providing a health coverage for 13,500 civil servants had been established on a geographical basis within the Ottawa area. Two additional health units, one in the Woods-Canadian Building known as No. 2 Health Unit, and one at the Sussex and John Street area known as No. 16 Health Unit, were opened during the year, making a total of 14 Health Units in all, serving just over 15,000 employees in the Ottawa area. It will thus be observed that more than half of the civil servants in the Ottawa area are being provided with health coverage, including Nursing Counsellor service.

Eleven Nursing Counsellors have been appointed during the fiscal year, and there were four resignations, which resulted in a net increase of seven Nursing Counsellors to the staff. In all, 33 Nursing Counsellors, under a Chief Supervisor and an Assistant Supervisor of Nurses, are employed by this division to fulfil the staff requirements of the 14 functioning Health Units.

Visits made to the Health Units throughout the fiscal year, by months, sex, nature and classification of visit, and disposal, are summarized in Table 2, page 113. It will be seen that 105,439 visits were made to Health Units, with a male to female ratio of approximately 3:4. This ratio is of particular significance in view of the sex distribution of the civil service employee population in the Ottawa area, namely, males 53 per cent and females 47 per cent. Approximately 75,000, or 70 per cent of the grand total, were recorded as first visits or visits resulting from new disabilities. The remainder were repeat visits to the Nursing Counsellor for further treatment or investigation of some previously reported condition. Some

40,500 visits were due to minor illnesses; 10,675 to minor accidents; 12,000 for consultation with the Nursing Counsellor concerning some health or welfare factor; and 4,234 visits were classified as "return to work" visits, that is, a visit following an absence on medical grounds.

Respiratory, digestive, menstrual disorders, and diseases of the skin and cellular system, in that order, are the predominating causes of visits to the Health Units. The ratio of respiratory to digestive disturbances over the entire fiscal year was 2:1, a ratio similar to that experienced during the two previous years. The seasonal fluctuations, both in total monthly visits to the Health Units and in the incidence of respiratory and digestive disorders, is of particular significance and is clearly shown in Table 2. Respiratory diseases are much more prevalent in the latter six months of the fiscal year. Digestive disturbances reach their peak during the warm summer months when respiratory diseases are at their lowest level. No serious outbreaks of communicable disease were reported during the period under review. The extremely low percentage of employees (2 per cent) who were sent home following a visit to the Health Unit has been previously commented upon. These and other interesting observations are apparent from a study of Table 2.

(b) *Health Centre*

A consolidated summary of the work conducted at the Health Centre of the division is presented in Table 3, page 114. In all, 4,611 employees were referred to the Health Centre for examination, consultation, or treatment of emergencies by the staff physicians and consultants. In addition, the divisional psychologist conducted more than 150 consultations on employees referred to him by the division's staff physicians, nursing counsellors and departmental personnel or administrative officers.

More than 2,500 X-rays were taken, of which over 80 per cent were chest films, either routine miniature or standard 14 x 17-inch films. The remainder were taken for a variety of conditions, usually as a result of injury or accident. The volume of X-ray work handled was considerably less during the past fiscal year in view of the mass community chest X-ray survey conducted throughout the City of Ottawa in the fall of 1949. This survey made unnecessary the number of smaller departmental surveys formerly carried out by the X-ray facilities of this division. Approximately 3,500 laboratory procedures were conducted by the clinical laboratory at the Health Centre.

(c) *Certificate Review Section*

This section is responsible for the review and processing of all medical certificates of disability for duty received from across Canada, and the review of all medical examination forms in connection with the application for permanency and superannuation (Schedule "J"). In all, 55,584 disability certificates were received for review and processing. Medical officers of the division reviewed and made recommendations on 9,342 applications for permanency.

All relevant statistical information from the above disability certificates on sickness absenteeism was collected for tabulation and analysis by the Dominion Bureau of Statistics. In this connection it is desired to pay tribute to the Dominion Bureau of Statistics for invaluable assistance in the compilation and preparation of this statistical data on sickness absenteeism in the Civil Service. The results of this analysis will be included in a special report to be prepared by this division at a later date.

Retirements from the government service for medical reasons, by cause of disability and age group during the past fiscal year, are shown in Table 4,

page 115. Of 183 separations almost 80 per cent have occurred between the ages of 50 and 60 years. Diseases of the circulatory system, bones and organs of movement, and diseases of the nervous system, in that order, are the three chief causes of separation on medical grounds from the government service.

Associated Activities

The opening paragraphs of this report have made reference to a variety of activities, both departmental and extradepartmental, in which the division has taken an active part. Several other activities are worthy of mention.

In the fall of 1949, the Ottawa Anti-Tuberculosis Association and the Kinsman Club of Ottawa, in co-operation with the City Health Department and the Division of Tuberculosis Prevention of the Ontario Department of Health, conducted a voluntary mass chest X-ray survey of all Ottawa citizens. This division played an important role in planning and organizing participation of the government employee population in this survey. Some 24,408 employees, or 95 per cent, were X-rayed. It is exceedingly gratifying to record that the incidence of pulmonary tuberculosis has fallen since 1944, when the last survey was conducted in the Civil Service, from 1.98 per cent to 0.45 per cent, a reduction in incidence of over 75 per cent.

Early in the fiscal year the division instituted a program of periodic health examinations, including X-ray and certain immunization procedures, for personnel of the Department of National Health and Welfare engaged in duties which involve a definite and substantial exposure to tuberculosis or other diseases and infections as part of their regular work. This program included physicians and nurses engaged in clinical or laboratory work, hospital and nursing station personnel, X-ray, and laboratory technicians, and other groups exposed unduly to occupational hazards. Employees of the Indian Health Services, certain personnel in the Quarantine, Immigration and Sick Mariners Division, and the staff of Hygiene Laboratories are chiefly concerned in this program which commenced to operate in September, 1949.

Finally, it is desired to mention the preparation and distribution of a folder entitled, *A Health Service for Federal Government Employees*. This folder, designed to provide information for directors, chiefs, and supervisors of government departments, has proven a most useful medium for the dissemination of knowledge concerning divisional activities and the means by which the health service can best be utilized.

DENTAL HEALTH

Since the use of preventive methods, beginning in early childhood, holds out the only hope of overcoming dental disease, the Dental Health Division continued to devote itself extensively to public education and research.

It found that, while some useful preventive procedures are known, there was urgent need for further research in this field. The situation in Canada is such that it is physically and financially impossible to meet the existing need for fillings, straightening of irregular teeth, treatment of gum diseases and for dentures. Even if the number of dentists could be doubled immediately and their total combined efforts directed to caring for the elementary school children alone, it is estimated that it would take nearly a year to catch up with the backlog of dental treatment needs of only that one group.

New educational material provided during the year included: a colour film and two colour filmstrips for use in elementary schools, a series of six

coloured teaching posters for schools, two illustrated booklets for school use, a four-page coloured supplement for *Canada's Health and Welfare* and several articles in that and other journals. In addition, several addresses were delivered before professional and other bodies.

The two-year demonstration project, in which intensive two-day lecture and clinical courses for dentists in dentistry for very young children were operated in nine of the ten provinces, was concluded successfully at end of the year. Its purpose was to stimulate interest in this work and to provide refresher training for dentists who had graduated before dentistry for children was taught in universities as intensively as at present.

A specialist in dentistry for children, Dr. S. A. MacGregor, was employed on a part-time basis and an itinerary was set up with the co-operation of provincial dental associations and departments of health. As this was a type of professional education, it could not be continued properly as a function of the department, and was, therefore, regarded solely as a demonstration program.

During the year, also, further research was carried out at Stratford, Ont. into the effects of naturally fluoridized water upon periodontal tissues. Clinical assistance was provided for the Nutrition Division in connection with survey work and consultant service was furnished to other divisions.

The division found satisfaction in the fact that four more provinces set up Dental Health Divisions during the year, making a total of six having such services. In September 1945, only one province had such an establishment. At least two more are expected to be set up shortly.

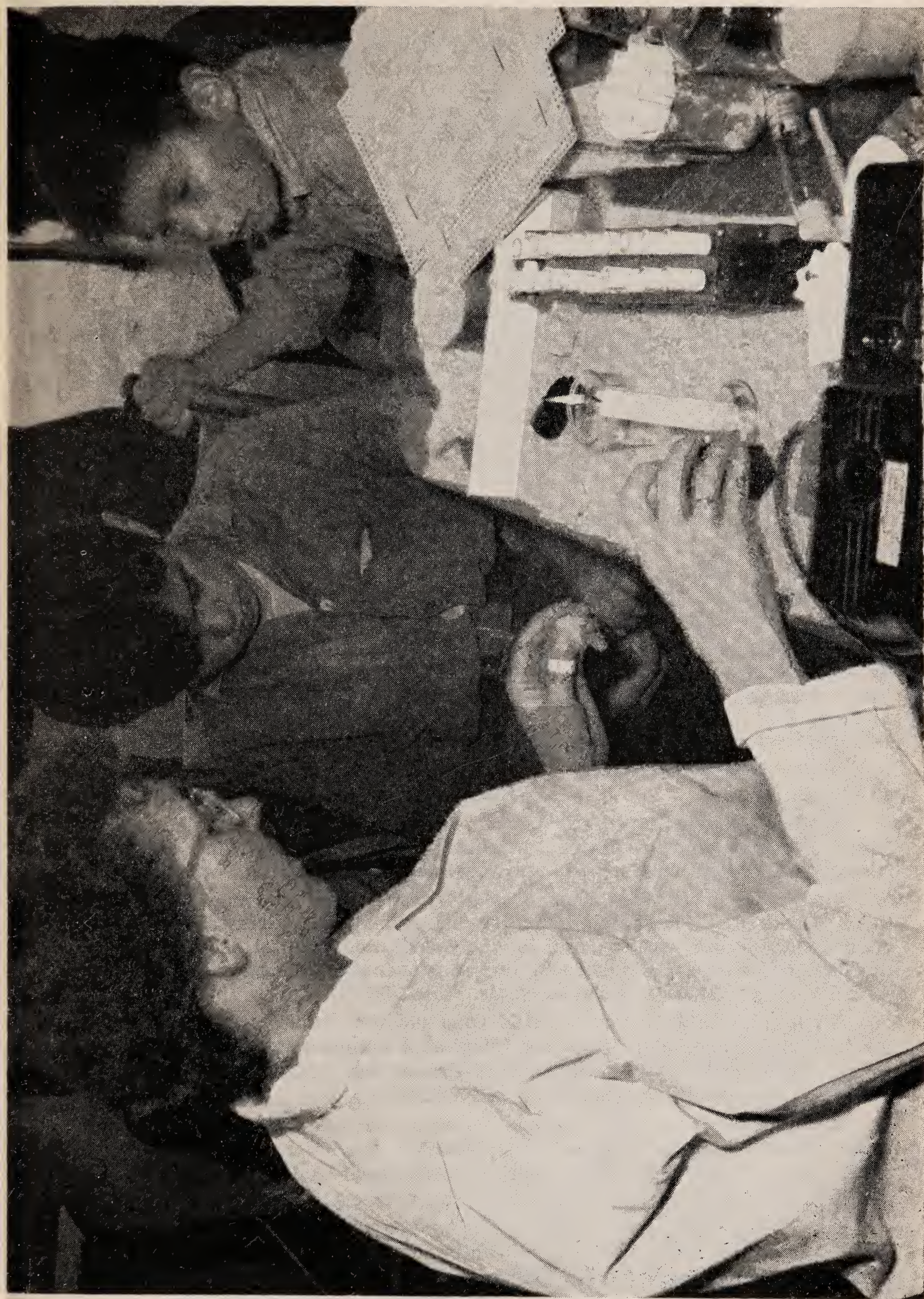
EPIDEMIOLOGY

Activities of the Epidemiology Division were three-fold. Epidemiological studies to be made by the provinces were discussed and stimulated through contact with provincial epidemiologists, the division co-operated with other divisions of the department, with other government agencies and with universities in carrying out studies of an epidemiological nature, and up-to-date charts and graphs were kept of the incidence and prevalence of communicable diseases as they were reported.

At intervals, conferences were held with Quebec and Ontario epidemiologists concerning studies of a field nature and plans were drawn up in anticipation of future activities. Similar conferences will be held with all provincial epidemiologists.

The division was concerned, also, in the making of plans, instruction of enumerators and printing of forms and other material for a sickness survey to be conducted in the provinces. This survey, to be carried out on a country-wide basis, and including monthly visits to the same families over a period of a year, will be the first of its kind ever attempted anywhere. It will provide figures showing expenditures for medical care and the incidence and prevalence of certain illnesses, as well as relevant social economic data with respect to the families under study. Neither Canada nor the individual provinces now have such precise information, which is important and has many uses.

Without such detailed survey, data required could be obtained only by assuming that figures for this country's sickness were the same as those of the United States or Great Britain. The sickness survey will provide figures of the greatest value in health planning.



Surveys assessed the dental, nutritional and other conditions of little Canadians.

The Epidemiology Division co-operated with other divisions of the department and with the Province, in a health survey, including a study of health facilities, in Newfoundland, and information obtained was supplied to the province to assist in its health planning.

The East York-Leaside Morbidity study started last year, in conjunction with the University of Toronto, was continued and the division again provided technical services as required.

In co-operation with the Department of Agriculture, a paper was prepared on *Brucellosis* in Canada, and was presented at a meeting at Bethesda, Maryland, of persons interested in this disease. It aimed to present a picture of this disease as it exists in Canada, in order that plans for its control and eradication might be made on a joint basis with the United States.

An information service on diseases was kept up-to-date throughout the year. Articles and extracts of interest to persons in scientific work throughout the country were forwarded to them as required. This service has proven of great value to other divisions of the department in the preparation of studies and drafting of projects.

HOSPITAL DESIGN

Assistance was given by the Hospital Design Division to the directorate of Health Insurance Studies in the administration of the Hospital Construction Grant funds provided under the National Health Program.

All plans for proposed building projects were reviewed and, in many instances, suggestions were made for improving designs. In some cases explanatory drawings were provided to authorities proposing the work. The amount of federal assistance appropriate for hospital construction projects was also determined and calculations were made for proportional grants.

At the same time, this division provided consultation to the department on planning problems and produced drawings where required.

At the request of the Minister of Health of Manitoba, the Chief of the Division compiled a confidential report on the physical plants of twelve hospitals in that province, with recommendations concerning each.

During the year the Chief of the Division received numerous invitations to address professional groups on his specialty. Addresses on problems of hospital design were given to the Maritime Hospital Association and the Canadian Hospital Council and, on fire prevention in hospital design, to the Association of Canadian Fire Marshals.

A paper entitled *Alterations, Additions and the Architect* was presented to the Western Canadian Institute for Hospital Administrators and Trustees and papers were read on the principles of design and construction of hospitals at the Alberta Hospital Association convention.

Hospital planning and construction was the subject of a day's lecture to students taking a hospital administration course at the University of Toronto. A day was also spent with the architectural students at the University of Toronto in criticism of hospital planning projects.

The Chief of the Division also acted on a board of judges in an architectural competition held in the United States for a *Small Hospital*. The Department considered this a signal honour, since its representative was the only member of the board of judges not practising in the United States.

INDUSTRIAL HEALTH

Agencies designed to maintain good health in industry continued to play an appreciable role in the economic and social development of the country. The wealth and standard of living of Canadians is dependent, to a large extent, upon the productive capacity, skill and ingenuity of the more than 5,000,000 people—over one-third of the population—gainfully employed in a wide range of industries, trades and services.

The Industrial Health Division assisted and co-operated with the provinces with a view to the establishment and co-ordination of an effective national industrial health program through maintenance of: medical and nursing consulting services for promoting and improving industrial medical programs and appraising industrial health problems; laboratory services for research and surveys and investigations of industrial health hazards; educational and technical information services for promoting personal and plant health practices, and advice and assistance to the provinces in the establishment of appropriate industrial health measures.

Technical assistance was given by the division to federal departments, such as: advice to the Department of Agriculture in connection with human toxicology of insecticides, required to license the various products under the Pest Control Products Act; health supervision of radioactive materials distributed through the Atomic Energy Control Board; advice and assistance on occupational and environmental industrial health hazards, to the Civil Service Health Division of this department, and also to other departments, such as Labour, Mines and Technical Surveys and National Defence.

Through study and research, discussions and exchange of views with industrial health agencies and industry, and by the maintenance of a progressive reference bibliography, the division collected, collated and disseminated up-to-date informational material with respect to occupational and environmental health problems.

Medical and Nursing Services

The clinical assessment of health problems being of prime importance in ensuring a healthy, well-adjusted working force, the division continued to provide medical and nursing consulting services for the appraisal of health problems in industry.

Through addresses to professional and industrial audiences and by numerous articles in technical and lay publications, the medical and nursing staffs of the division outlined the benefits to be derived from a comprehensive industrial health program in industry, embracing preplacement and periodic medical examination, with vocational guidance and rehabilitation, early and efficient care for occupational accidents and illness, emergency care for non-occupational complaints, health education and counselling, medical and engineering control of occupational hazards and the supervision of other facilities associated with health.

During June and July, personnel from the division assisted with an industrial health survey of industry in New Brunswick, a necessary step in the development of a provincial industrial health program. The survey was a joint project with the New Brunswick departments of Health and Social Services and Labour. Data were collected from plants engaged in mining, manufacturing, and storage, and from laundry and dry cleaning establishments; 45 per cent of the 453 plants of eligible size in these groups were surveyed. The report on this survey, now ready for distribution, provides

information on the scope of the problem in New Brunswick. It includes conclusions and recommendations arising out of information gathered during the survey.

A highlight of the year was the distribution of a reference manual for physicians on occupational disease. This manual was compiled jointly by the staffs of this division and the Division of Industrial Hygiene of Ontario and has been well received by professional personnel in Canada and abroad. One of the foremost British medical journals commented upon it: "Nearly all that is worth knowing about industrial medicine and toxicology is adequately dealt with in the 200 pages."

Technical assistance and information were provided in answer to many requests received from governmental and industrial sources. These inquiries asked for information on subjects such as health problems in lighting, germicidal ultra-violet rays, working conditions generally, hazardous chemicals and toxicological data on lead, beryllium, cadmium, tellurium, arsenic, and so forth.

Preliminary investigations were carried out on a condition known as "seal finger", which affects seal fishermen and is a widespread and disabling condition in certain coastal areas. This investigation is continuing.

The senior nursing consultant assisted in educational programs relating to industrial nursing at several universities and a progressive program in this field has been developed for the future. Placement and recruitment of nursing personnel for industry were actively carried out, with considerable success.

During the past year members of the staff published papers in various professional journals and gave addresses on health problems in industry at university meetings, public health gatherings and medical and scientific conventions. The staff also participated in conferences of various professional bodies in the United States. The division was represented on many executive committees dealing with industrial health problems.

Laboratory Services

Laboratory facilities of the division were applied toward technical solution of health problems having their origin in the working environment of the Canadian employee and were combined with the medical and educational approaches to provide a broad co-ordinated attack on the causes of ill-health among wage-earners.

With reference to environmental studies conducted in the industrial health field in co-operation with provincial authorities, industrial health work was supplemented by investigational and analytical activities in the Ottawa laboratory.

The division's X-ray Geiger counter spectrometer operated for the second year on the evaluation of silicosis-producing dusts in the air of factories, mines and foundries. The first such instrument in the world to be devoted wholly to health control, its cost was less than compensation for a single silicosis case.

A new high-speed polarographic method for determining lead in urine and air was set up and employed with success in the fight against one of the oldest and most intractable of compensable diseases. The methyl bromide detector, developed and patented last year, was applied successfully to the detection of two new important industrial hazards, trichlorethylene vapour and carbon tetrachloride vapour.

Environmental service in conjunction with efforts to ensure a high level of health in the public service was extended to the department's Civil Service Health Division. This included surveys of lighting and noise conditions, analyses of urine for lead, and dust measurements in a government laboratory engaged in work with silica materials.

Laboratory staff served on the Safety Code Correlating Committee of the American Standards Association and the association's sub-committee on Maximum Allowable Concentration of Toxic Materials in Air. This representation was on behalf of the Canadian Engineering Standards Association. In addition, the laboratory staff acted on the Safety in Refrigeration Committee of the Canadian Standards Association and upon the Insecticides Committee of the Canadian Government Purchasing Standards Association.

Consultant service was rendered to the Northwest Territories Council in connection with the hazard to the health of arsenic-bearing roaster fumes from mining operations at Yellowknife.

In the division's role of consultant in pesticide toxicology, to the Dominion Department of Agriculture, the laboratory prepared current evaluations on new technical insecticides such as parathion, D.D.T., aldrin, and dieldrin. Additionally, the laboratory staff acted on the Washington Respirator Committee of the United States inter-departmental sub-committee on Pest Control, in connection with the selection of performance standards for respiratory protective devices to be employed by those exposed to parathion in the field. A wide variety of technical advice was given to the Department of Agriculture in connection with applications for license of such products under the Pests Control Products Act.

Educational and Technical Information

The division prepared and distributed educational and technical information on industrial health practices. This material was distributed to professional personnel concerned with the health of workers and to management and labour groups. In carrying out its comprehensive program of health education, the division kept all sectors of industry informed of established procedures for maintaining a safe and healthful working environment. It also distributed information on new conditions, processes and materials which might affect health.

Distribution was continued of the monthly *Industrial Health Bulletin*, which contained articles on a wide variety of industrial health subjects. The Bulletin was supplied to all Canadian establishments having more than 15 employees, to 2,000 trade unions, to governmental and professional agencies and to many interested individuals. Many of the Bulletin's articles were reproduced in other journals and a large correspondence with industrial and labour groups was a significant feature of this project.

Two issues of the *Industrial Health Review* were distributed during the year. This publication was directed towards professional and technical personnel working in the field of industrial health and was technical in character. Of each issue, 10,000 copies were distributed to physicians, industrial nurses, public health organizations, industrial chemists and engineers and others interested in the maintenance of a high standard of health among the working population. Considerable correspondence in connection with the *Review* indicated that this publication was providing a much-needed medium for the interchange of views on industrial health matters.

When the manual *A Guide to the Diagnosis of Occupational Diseases* was distributed, it was very well received and favourable reviews appeared in many technical and professional publications.

During the year, six posters on general industrial health topics were distributed as inserts in the *Industrial Health Bulletin*. These posters have been reproduced in several technical journals as poster suggestions for other industrial health organizations.

LABORATORY OF HYGIENE

The program of National Health grants, particularly the Survey Grant, began to concern the Laboratory of Hygiene closely during the year. Four of the provinces requested the services of the Laboratory to assist them in surveying their public health and hospital laboratory facilities.

New Brunswick, the first province to make such a request, asked for a program for the orderly expansion of its laboratory services to cover approximately a ten-year period. Since this was a new activity, it was undertaken by the Chief of the Division and latterly with the assistance of a competent laboratory research worker.

Such surveys become highly complex, technical studies involving such questions as the precision of techniques carried out in various laboratories, the qualifications and suitability of personnel and the adequacy of space and equipment. Careful consideration must be given not only to the current responsibilities but also the future relationships of the laboratory to diagnostic and therapeutic medicine.

A similar survey has been started for the Province of Saskatchewan, and requests have been received for studies in Prince Edward Island and Newfoundland.

These survey activities emphasized that the Laboratory of Hygiene, which serves as the National Public Health Laboratories, must be thoroughly familiar with hospital laboratory diagnostic procedures particularly in the fields of biochemistry, bacteriology and haematology. To that end, and in order to provide specialists familiar with the real day-to-day problems, arrangements were made with an Ottawa hospital for members of the staff to work in the hospital laboratories studying specific problems. The results of such studies will be made available to all Canadian institutions.

The Laboratory of Hygiene co-operated with other divisions of the department and continued collaborative investigations with the Divisions of Nutrition, Dental Health, Public Health Engineering, and Epidemiology. The Laboratory continued to act in an advisory capacity to the Director of the Food and Drug Divisions in respect to safety, potency and therapeutic efficacy of drugs, such as serums, vaccines, toxoids, antibiotics and disinfectants.

New Facilities

A new section—the “Canadian Tumour Registry”—was brought into service during the year. This new activity, suggested by the Technical Advisory Committee on Public Health Laboratory Services, was undertaken in collaboration with the National Cancer Institute.

Plans have been completed for a new virus research building to be located in Ottawa, and it is hoped that construction will be started during next year. So far, the Laboratory of Hygiene has been unable to study some of the virus infections of great importance to Canadians, because of the lack of suitable quarters which would enable virus workers to handle safely such infectious agents and to protect themselves and other workers. Despite the lack of these facilities, much useful work has been conducted.

For many years the department has realized the total inadequacy of the laboratory facilities in the Western Branch at Kamloops, B.C., of the Laboratory of Hygiene, which is responsible for laboratory work in connection with the study of such diseases as Rocky Mountain Spotted Fever, Sylvatic Plague and some of the virus diseases of particular concern to Western Canada.

During the past year an agreement was completed with the University of Alberta for the lease of a four and a half acre site on the campus of that uni-

versity. Plans for a new, thoroughly modern, laboratory building have been completed and it is anticipated that construction will be undertaken next year. The location of this laboratory on the campus of the University of Alberta will make available to the department the full facilities of the University hospitals, teaching departments, research divisions, etc., and will thus provide the level of co-operation essential in this field.

For some ten years the Laboratory of Hygiene has operated a mobile trailer laboratory, particularly for the study of sanitary problems affecting the Canadian shellfish industry on the Atlantic coast. This mobile laboratory having outlived its usefulness, a new bus type unit has been ordered to take its place.

About two years ago, co-operative plans for further studies of shellfish sanitation problems were completed in co-operation with the United States Public Health Service (Marine Biological Station, Wood's Hole, Maine). There are a number of problems of real importance to the Canadian fishing industry, problems which also face the industry in the United States. The Laboratory of Hygiene can therefore perform a most practical function by making every effort to protect and expand the Canadian shellfish industry by studying the public health problems which are of concern to both countries.

Thirty Years Forward

Looking back over some thirty years of existence, the Laboratory of Hygiene took stock this year of developments in that period. It noted that, in a letter written under date of March 2, 1921, to the Minister of Health, the then Deputy Minister, Dr. John Amyot, drew attention to the fact that the Act respecting the Department of Health authorized "the establishment and maintenance of a national laboratory for public health and research work".

He drew attention to the many requests which had been forwarded from various lay bodies interested in public health, from the medical associations of the provinces, medical councils, and the various Boards of Health, and stated: "In fact this (the establishment of national laboratories) was the outstanding factor, the centre around which they knew so well such a department would of necessity functionate, where the facts could be tested that would make a Department of Health operate intelligently".

In his letter Dr. Amyot outlined the work of the division as he saw it.

- "(a) To inspect places of manufacture and investigate and certify to the purity, stability and standardized strength of chemical products used medicinally, particularly those of highly complex nature (e.g. Salvarsan) which are administered directly into the systemic organism hypodermically, intramuscularly or intravenously.
- (b) To make similar inspection, examination and certification in reference to potential biological products used in similar ways, such as vaccines, antisera, antitoxines, serological cancer treatment materials, etc., etc.
- (c) To make investigation into diseases especially peculiar to our own country or those modified by our own condition.
- (d) To carry on investigation in looking to correction of the conditions producing ill health and disease amongst workers in the trades, and in rural and urban localities—e.g. gas-poisoning, dust-poisoning, production of deafness and blindness, diseases such as glanders and anthrax, etc.; preservation and protection of food, water supplies, sewage and water disposal, use of by-products, ventilation of dwellings, etc.
- (e) To encourage effort by teaching the members of the professional staff of the department and other such departments as the Army Medical Service, so that they, too, will be able in their various assignments to

observe and record their scientific observations. Some of the finest work done in research in the U.S.A. Service evolved out of work begun in their Public Health Service Laboratories—Yellow Fever and its control, control of Malaria, Hook-worm control, milk investigations, world-wide accepted standards in biological products and out of their departments professors and workers in many scientific fields have been developed.

- (f) In conjunction with the universities, to carry on in the universities special investigations in which the universities are able to supply the facilities necessary in the shape of laboratories and special apparatus, which would be very costly if got together specially for the investigation in hand”.

Item (a) has to do with the control of arsenical drugs and became the responsibility of the Food and Drug Divisions when the Section of Pharmacology of the Laboratory of Hygiene was transferred to the Food and Drug Divisions some four years ago.

Item (b) has been, and remains, one of the major activities of the Laboratory of Hygiene.

Item (c)—several investigations of the kind outlined are being carried out particularly in respect to virus diseases and enteric infections.

Item (d)—the majority of these activities are carried out by either the Industrial Health or Public Health Engineering Divisions of the department.

Although Item (e) has been largely taken over by universities, the Laboratory of Hygiene has an active program for the training of highly specialized workers in fields such as syphilis serology and parasitology, and training courses in other fields will be established in the near future.

Finally, under Item (f), Dr. Amyot envisioned a co-operative program with the universities. This program has been under way for some three years with such institutions as McGill University, University of Toronto and the University of Alberta, and the Laboratory of Hygiene is looking forward to more extensive co-operation, not only with universities but with provincial departments of health and other agencies.

Dr. Amyot's report is considered remarkable in that the real objectives of a laboratory division and the objectives which he set forth are as sound today as they were thirty years ago, although, in fact, the department has not yet fulfilled in all detail the plan outlined in those earlier days.

Staff

It was demonstrated again this year that the Laboratory of Hygiene was fortunate in being staffed by competent, enthusiastic workers. The high level of scientific work performed would have been impossible without the most complete co-operation of all members of the staff. The Laboratory was still handicapped by a shortage of trained specialists, particularly in the field of bacteriology. Difficulties in recruitment continued to be related to the inadequacy of salaries and to the lack of opportunities for advancement to salary levels commensurate with those available in other fields. This was particularly true in regard to senior staff, having in mind the high degree of specialization and technical competency required.

Details follow of work of sections of the Laboratory of Hygiene during the past year.

Section of Bacteriology and Immunology

One of the major functions of this section being to assist the Food and Drug Divisions in the standardization and control of vaccines, toxoids, sera and analogous products, some 142 specimens of antitoxins, toxoids and similar

products were tested during the year for safety, identity and potency. Of these, 9 lots were rejected. Sterility and safety tests were carried out on 137 samples of various preparations. One lot of dextrose saline solution was found to be contaminated and was removed from the market. Several lots of other products were rejected because they failed to meet the standards maintained under the Food and Drugs Act.

Considerable assistance was rendered to the Canadian Red Cross Blood Donor Service by testing intravenous administration sets, intravenous solutions, distilled water, etc., which are used in blood banks of the various hospitals collaborating with this national organization. About seven per cent of the specimens submitted (342) were found to be unsatisfactory and the proper authorities were so advised.

During the past year, a new product—BCG (anti-tuberculosis vaccine) was added to the list of licensed drugs. Safety, identity and effectiveness of this drug are being actively studied. Two Canadian firms are licensed for the manufacture of this product. Investigations are being conducted in methods of testing and controlling potency, safety and efficacy of many biological products such as tuberculins, typhoid vaccines. Particular attention is paid to the quality of the product used for their preparation.

An inspection of manufacturers' establishments licensed for the preparation of such drugs is carried out regularly and, to date, all those on this continent have been inspected.

Immunization Studies. An investigation of the method and materials used for the immunization of children was undertaken in collaboration with the Department of Bacteriology and Immunology of McGill University and the Child Health Association of Montreal. To date, it has been shown that infants three to four months of age give excellent response when they are inoculated with diphtheria toxoid, tetanus toxoid and pertussis vaccine given separately or combined. These results are important, since by early immunization, the mortality due to these diseases may be significantly reduced. Findings to date have been published in the scientific journals.

Further studies are under way concerning the comparison of vaccines manufactured by different techniques and it is planned to conduct a study on the effectiveness of recall or secondary stimulus doses on children about to enter school.

Oral Immunization. Studies were made of the use of diphtheria toxoid as a secondary stimulus when given by the oral route. Results obtained in preliminary experiments with guinea pigs were striking and for this reason, human trials have been undertaken. The clinical trials are being carried out in collaboration with McGill University, the Child Health Association of Montreal, and the Connaught Medical Research Laboratories of the University of Toronto.

Enteric Bacteriology. The National Salmonella Reference and Typing Center received 336 cultures for identification. A new type of Salmonella, isolated by Dr. C. E. Dolman and associates in Vancouver, was identified in the Salmonella Reference Center. The Center prepared and distributed to provincial public health and D.V.A. laboratories some 204 liters of standardized suspensions for use in the Widal test. Other diagnostic reagents were supplied as required.

Diphtheria and Haemolytic Streptococci. The laboratory continued to provide a service for the identification of diphtheria and haemolytic streptococci and other group organisms. During the year, 220 cultures were submitted for identification. In addition, many requests for special strains of these organisms were received and the cultures supplied.

Shellfish Sanitation. Bacteriological surveys of oyster-and-clam producing areas were conducted during the year and the mobile laboratory was used for five months, studying many of the problems which arise in this industry. A large number of samples of shucked shellfish imported from the United States were examined and a high proportion of them rejected as being of unsatisfactory quality. During the year, a meeting of the Interdepartmental Shellfish Committee was held, at which time representatives of the United States Public Health Service were present and tentative standards acceptable to both countries were prepared.

Mussel Poison. As in previous years, a close check was kept on the toxicity of clams and mussels harvested on coastal areas. This was a collaborative problem involving the Department of Fisheries, the Fisheries Research Board, the Province of British Columbia and the Laboratory of Hygiene. A close check was also maintained on the safety of commercially canned clams and 550 samples representing 268 packs from 9 commercial canners were tested. One pack was rejected because of toxicity.

Parasitology. Surveys to determine the incidence of trichinosis and amoebic dysentery in Canada were undertaken. Human diaphragms from 85 post-mortem cases in British Columbia were examined for the presence of trichinosis and approximately 6 per cent were found to be infected. The Western Branch submitted 1,400 tissues from wild rodents, 7 per cent of which were found to be positive for trichina. The percentage of infected rat diaphragms was found to be as high as 33 per cent for those rodents collected in the vicinity of some West Coast piggeries. Studies related to the incidence of amoebic dysentery were conducted in collaboration with the local hospitals. A training program for provincial laboratory workers is planned and arrangements have been made for a refresher training course next year, available to the personnel of all provincial public health laboratories. Training aids for use in the provincial laboratories have been designed. Several of the provincial laboratories have taken advantage of this service.

Section of Syphilis Serology

Emphasis was placed by the Syphilis Serology section upon services to the provincial public health laboratories, since, in syphilis serology, certain phases of the work can be performed to advantage in a central laboratory, both from the standpoint of economy and uniformity of results. In this role, the laboratory prepared and standardized reagents (antigens, complement, hemolysin) used in blood tests for syphilis, which are distributed to the provincial laboratories, free of charge. Refresher courses were offered to provincial serologists. Surveys were conducted to evaluate the accuracy of the blood tests as performed in the various provincial laboratories, the Laboratory of Hygiene serving in the capacity of a national reference laboratory.

During the year, activities of the section were widened to include clinical biochemistry and plans were prepared to set up a fully-equipped laboratory for such studies.

Distribution of Reagents. Approximately 70 liters of carefully standardized reagents, used in the performance of serologic tests for syphilis, were supplied free to provincial public health laboratories and to the hospital laboratories of the Department of Veterans Affairs. These reagents had a current market value of more than \$32,000 and it was pointed out that this service accounted for only a portion of the time of the laboratory staff.

Dried Syphilitic Serum.—With the decreasing incidence of syphilis, some provincial laboratories experienced difficulty in obtaining sufficient amounts of positive sera for test control purposes. The Laboratory of Hygiene, accord-

ingly, collected and dried specimens of positive sera for distribution as needed. It planned to build up a large reserve stock in anticipation of a further decline in the incidence of the disease.

Refresher Course.—A second refresher course in syphilis serology was conducted in November and attended by representatives from nine provinces. The course lasted three weeks, two of which were spent at the laboratory. During the third week the members of the group had opportunity to observe the routine performance of tests in the provincial laboratories at Montreal and Toronto. At a later date, a representative from the tenth province spent three weeks at the Laboratory of Hygiene.

Serological Survey.—The results of the fourth serological survey were analyzed and summaries of the data obtained were distributed to the participating laboratories. A fifth survey will be conducted next year, at the request of the provincial directors.

Special Studies.—Studies of purified antigens have been continued. Since the components of these antigens are isolated from extracts of beef heart tissue, certain difficulties are encountered in obtaining uniform preparations. During the last year, this division collaborated with the Banting Institute, University of Toronto, in an attempt to prepare entirely synthetic antigens suitable for the diagnosis of syphilis.

The correlation of the laboratory findings with the clinical history of the syphilitic patient was continued. In this way, it was possible to assess the efficiencies of new and improved methods, as well as of methods in current use.

The laboratory continued to collaborate with the Expert Committee on Biological Standardization of the World Health Organization in establishing international reference standards for blood grouping sera.

Section of Antibiotics and Disinfectants

A laboratory investigation of fifteen antibacterial chemotherapeutic agents was conducted during the year for the purpose of comparing their effects on microorganisms causing urinary tract infections which have been very difficult to control. Factors such as drug concentration, acidity, presence of urine, presence of blood protein, development of resistance to drugs by the organisms, combination of drugs and toxicity of drugs were considered. Laboratory investigation will be followed by clinical trials with a view to therapeutic application of the results.

In the fall of 1949, an outbreak of diarrhoea in a rural community was investigated by visiting the area and collecting data and specimens. Considerable information on the characteristics of the outbreak was accumulated and an opportunity was also provided of briefly observing some of the results of special treatment. The latter included the use of some of the newer antibiotics. The specimens collected were fast-frozen and returned to the Laboratory of Hygiene immediately for laboratory examination.

In an active control program carried out by this section during the year, more than 3,200 specimens of antibiotics were received and approximately 2,800 tests were conducted. Twenty lots were rejected as failing to meet Canadian standards. Some 250 specimens of disinfectants were tested and 68 of them rejected. In addition, the plants of many of the manufacturers licensed for the production of antibiotics were inspected. A program of research and studies related to standards for the control and quality of these drugs was carried out. A new method for the chemical estimation of crystalline penicillin was published. A number of basic investigations in respect to the mode of action of antibiotics and certain disinfectants were in progress.

Section of Virus Diseases

During the early part of the year, the laboratory was requested to investigate an outbreak of influenza which occurred in the Eskimos on Victoria Island, N.W.T. A member of the laboratory staff personally investigated the outbreak, collected specimens and aided in treatment. This epidemic caused a fatality rate of 20 per cent and an infectivity rate of 100 per cent among the Eskimos. The clinical and therapeutic aspects of the epidemic were fully studied and the results were published. Specimens were made available to the Connaught Medical Research Laboratories for independent study.

During the late summer an epidemic of non-paralytic type of poliomyelitis occurred in Prince Edward Island and the Laboratory of Hygiene was asked to assist in its investigation. A careful study was conducted and it was found that the epidemic was not caused by a virus of the poliomyelitis group but may have been caused by representatives of a new group of viruses.

A continuous study of cases of influenza was carried out by the Laboratory of Hygiene in collaboration with all the provincial laboratories, the Connaught Medical Research Laboratories, and the Influenza Information Centre of W.H.O. Special shipping containers were constructed for the preservation and shipment of specimens and were located at strategic centres across Canada.

A diagnostic laboratory service for virus diseases has been made available and constitutes one of the major functions of this section. During the past year, some 435 clinical specimens were submitted for diagnosis and a total of more than 2,600 tests carried out. Standardized antigens and reagents were prepared and, as soon as possible, training courses are to be provided for provincial laboratory workers.

Canadian Tumour Registry

On July 1, the Canadian Tumour Registry indicated that it was ready to receive specimens from all Canadian pathologists. During the first six months of operation, a total of 186 tumours were received from 32 pathologists. A large portion of these specimens was referred to the Committee of Consultants for expert opinion.

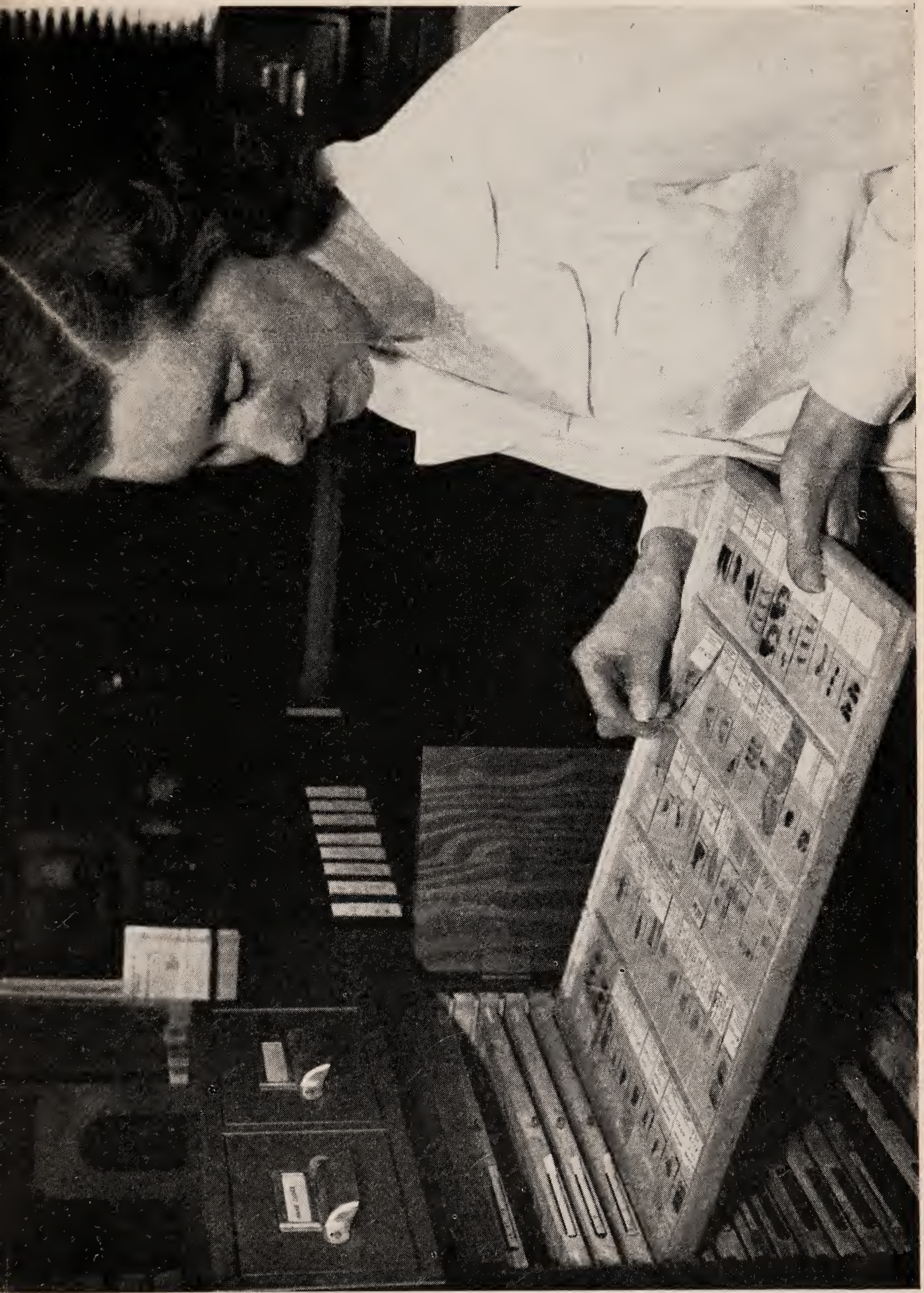
The Canadian Tumour Registry was established in the Laboratory of Hygiene as a co-operative project involving the National Cancer Institute and the Department of National Health and Welfare. Dr. Desmond Magner, Professor of Pathology at the University of Ottawa, was named Registrar by the National Cancer Institute. All of the staff, space and equipment are supplied by the Department of National Health and Welfare. The National Cancer Institute also appointed a committee of pathologists to serve as expert consultants in the diagnosis of tumours.

The objectives of the Registry are:

- (1) The collection of pathological material and related clinical data in the field of human tumour pathology. The collection of material from animal tumours used in experimental cancer research. The organization of this material in such a way that it may be made available for study by those concerned in the diagnosis and treatment of neoplastic disease in Canada.
- (2) The provision on request of any Canadian pathologist of the opinions of the Committee of Consultants appointed by the National Cancer Institute.

Section of Administration

The Administration Section had as its primary objective the saving of the time of scientists by undertaking for them all activities which could be handled by business and clerical staff. During the year, the Work Shop



Specimens of malignant growths, collected, recorded and filed at the National Cancer Institute's Tumor Registry in the Laboratory of Hygiene, assisted pathologists in cancer studies.

carried out 204 projects which resulted in a considerable economy of government funds as well as providing prompt and efficient service to the laboratory staff. The Animal Breeding Colony operated at a high level and supplied more than 17,000 animals for general laboratory use.

Western Branch, Kamloops, B.C.

One of the major activities of the Western Branch continued to be the study of plague infection in the ground squirrels of Western Canada. In southern Alberta, six specimens of fleas submitted from squirrels collected near the towns of Lomond, Cessford and Hanna were shown to be infected with highly virulent strains. In addition, one pool of tissue from squirrels taken near Lomond was also found to be positive. This finding at Lomond constituted a new focus of the infection and the first time that plague infection in ground squirrels had been detected in that area. So far, no evidence of plague infection has been found in the Province of British Columbia. These and other studies are collaborative projects between the various provinces and the Western Branch of the Laboratory. Field collecting crews and equipment are supplied and maintained by the provinces.

Rocky Mountain Spotted Fever. Although a number of human cases were reported from southern Alberta and a few suspected cases occurred in British Columbia, repeated attempts to identify the infection in ticks were only occasionally successful. This year some 2,400 ticks collected in southern Alberta and British Columbia were examined but in none was a rickettsial infection demonstrated.

Tularemia. Although this disease is widely distributed among Canadian faunae and is frequently encountered in plague studies, this year no signs of the infection occurred in either the ticks or rodent tissues examined.

Q Fever. This disease has been reported in many of the United States but has not yet occurred in Canada. Strains of the virus were obtained from the United States Public Health Service Rocky Mountain Laboratory, Hamilton, Montana, and the gross pathology of the disease in laboratory animals was studied in order that the laboratory staff might be familiar with this infection. Each member of the staff was given a series of preventive inoculations of Q Fever vaccine. Further studies of this infection are to be undertaken next year.

Leptospirosis (Infectious Jaundice). During the year, 67 live rats were submitted from various localities in the British Columbia coastal area. Nine specimens taken in the Fraser Valley yielded cultures of *L. icterohemorrhagiae*. As this study is continued, attempts are being made to assess the value of the complement fixation test as a means of detecting the infection.

Rat Bite Fever. This infection was present in a fairly high percentage of rats found in the Fraser Valley particularly in the immediate vicinity of Vancouver. Human cases were reported and a careful study of the distribution of infected rodents was in progress. A scientific paper was published describing some phases of the investigation.

Special Services and Diagnostic Antigens. During the year some 83 special diagnostic tests for Brucellosis, leptospirosis, tuberculosis, tularemia and lymphocytic choriomeningitis were carried out for local physicians, Indian Health Services, Provincial and D.V.A. laboratories. Some of these tests were relatively simple serological procedures requiring but a few hours to complete; others were lengthy biological and bacteriological examinations requiring up to several weeks for completion.

Diagnostic Brucella antigens, sufficient to prepare approximately 50 litres of standard suspensions, were supplied to provincial laboratories. Some 228 cc. of concentrated *P. tularensis* antigen were also supplied to various laboratories.

Technical Advisory Committee on Public Health Laboratory Services

The annual meeting of the Technical Advisory Committee was held in Ottawa on December 12, 13 and 14, 1949. All the members were able to attend, and Dr. Seward E. Miller, Chief, Laboratory Division, Communicable Disease Centre, United States Public Health Service, was the special guest.

There was a lengthy discussion of clinical laboratory diagnostic services in which it was revealed that the laboratory services available in many hospitals throughout the country were inadequate and presented a serious problem. One of the most important factors contributing to this condition was the acute shortage of adequately trained laboratory personnel. A special recommendation was made by the committee in respect to the inadequate training of many laboratory technicians. The acute shortage of laboratory space in many institutions was also stressed and was the subject of a resolution requesting special federal assistance.

The Laboratory of Hygiene was requested to provide refresher training courses in medical mycology, parasitology and enteric bacteriology. Integration of the activities of the provincial and federal laboratories in bacteriology, serology, virology and parasitology being an important function of this committee, programs of collaborative studies in these fields were reviewed and plans made for the coming year.

MENTAL HEALTH

Advice concerning administration of mental health grants provided in the National Health Program, and active educational work in its field made increasing demands upon the small staff of the Mental Health Division. In addition, consultant services were required on a variety of matters.

With the increase in federal grants to the provinces for the extension of mental health services and, ultimately, for the provision of free treatment, an atmosphere of encouragement pervaded this field and there was evidence of substantial progress in some phases of it.

In the fiscal years 1948-49 and 1949-50, the grant to the provinces was \$4,000,000. This is being increased in 1950-51, and increases are to be provided in future years, if the provinces demonstrate ability to use these amounts effectively, until a maximum of \$7,000,000 is reached.

During 1949-50, new projects from all provinces numbered 217, amounting to \$1,576,176.79, and there were 193 renewals of projects submitted in 1948-49, amounting to \$1,394,645.94. A few additional projects were rejected, on various grounds.

Adequate consideration of projects occupied much of the time of the personnel of the Division, since it called for intimate knowledge of existing mental health facilities in each province and appreciation of the lines of development which should be followed in order to lead to the widest insurance of good mental health.

Chief uses to which the provinces have put the mental health grants are: (i) to provide additional staff in mental hospitals, mental health clinics and psychiatric wards in general hospitals; (ii) to provide equipment for these three types of services and (iii) to provide training for personnel—psychiatrists, psychologists, nurses, psychiatric social workers—for the new services.

The amounts allocated from the grant have been divided between the services in the following proportions; 58 per cent for mental hospitals, 11 per cent for mental health clinics and 31 per cent for training and research work.

The Advisory Committee on Mental Health, the constitution of which was reported last year, met during October. Preceding this meeting the subcommittee on research and statistics met and drew up recommendations regarding extension of statistics on mental health.

In addition to consideration of various uses of the Mental Health Grant, the Advisory Committee recommended that a separate subcommittee be set up on research, that the subcommittee on training report on the most effective method of approaching the Royal College of Physicians and Surgeons with regard to the problem of psychiatric training, and the certification of psychiatric hospitals to that end, and that the subcommittee on training approach the licensing bodies to ascertain their attitude towards the setting of an examination in psychiatry as part of the requirement for licence to practise.

Informational Work

Child training pamphlets produced by this division, through the Information Services Division, continued to be very popular with public health personnel and social workers as well as with parents. Additions were made to the list by the production of new pamphlets on *Thumbsucking*, *Lying and Stealing*, *Nervous Habits* and *Stuttering*. During 1950, six more pamphlets will be added to the child training series on the subjects of *Responsibility*, *Aggressiveness*, *Rewards and Punishment*, *Play and Play Materials*, *Cleft Palate Speech* and *Lisping and Baby Talk*.

A new *School Age Child* series will be published, in English and French, during 1950. The titles projected for this series are, *Bullying*, *Destructiveness*, *Psychological Management of the Sick Child*, *Children's Spending Money*, *Honesty* and *Discipline*. A pamphlet, *Notes on Medical Treatment of the Epileptic Child*, is planned in 1950. Designed for physicians, it will contain the most recent information on the treatment of the various types of epilepsy that occur in children. A pamphlet, *The Home Care and Training of the Backward Child*, produced in 1949, has been widely distributed and well received throughout the provinces.

A third film in the Mental Mechanisms series *Overdependency*, was released in May, 1949. Its premiere showing, in both English and French, was to large audiences at the American Psychiatric Association meeting in Montreal. Through the year, both *Overdependency* and the two previously-produced films, *Feeling of Rejection* and *Feeling of Hostility*, were shown widely throughout America and Northwest Europe and met with great acclaim. A fourth film, *Guilt*, was in production, and will be released during 1950.

In an effort to present to parents the normal emotional development of children, the first film in the Ages and Stages series, *He Acts His Age*, was released during 1949. The film *Why Won't Tommy Eat?* continued to be shown widely.

Consultant Services

Consultant service was rendered to the Narcotic Control Division, Immigration Medical Service, Hospital Design Division, Civil Aviation Medicine Division and the Indian Health Services of the Department, to the Department of National Defence, the National Film Board, the Department of Citizenship and Immigration, and to the Dominion Bureau of Statistics.

NARCOTIC DRUG CONTROL

Efforts to stamp out illicit traffic in narcotics were intensified by the Narcotic Control Division, in cooperation with the Royal Canadian Mounted Police and other enforcement agencies, and an increase was registered in the number of convictions obtained for unlawful handling of drugs.

While Canada's known drug addict group remained fairly constant—approximately 3,500 individuals—and while the legitimate trade in narcotics was supervised effectively, an upsurge in smuggling, particularly of heroin, increased the vigilance of officials charged with regulating the importation, manufacture and distribution of the country's narcotics and with suppressing their illicit use.

Special efforts were made to apprehend those connected with bringing in heroin illegally, its distribution by peddlers and use by addicts. In view of the limited amount of heroin imported, it was apparent that little, if any, of the supplies found on the illicit market were in any way connected with the legitimate trade.

It was again evident to enforcement officials that those whose chief source of narcotics was the underworld were paying fantastic prices to satisfy their cravings and were resorting to crime to obtain the necessary money—with consequent heavy economic loss to Canada.

Crime and Conviction

Of 355 convictions under the Opium and Narcotic Drug Act during the judicial year ended September 30, 1949, there were 336 for illegal possession of drugs, as compared with 238 in the preceding year. There were also 18 convictions for unlawfully selling or offering narcotics for sale, and one conviction for illegally transporting them. Of these convictions, 298 involved heroin.

The great majority of those convicted had police records of varying length. Information available to the Department indicated that most of them were "repeaters". Of 340 persons involved in the 355 convictions, 15 had to be dealt with twice during the year for separate offences.

Sentences imposed were: 174 up to one year, 95 from one to two years, 52 from two to three years, 16 from three to four years, five from four to five years, nine from five to six years, two from six to seven years and two for seven years or more. In addition, 14 convictions were registered under the Criminal Code for periods of from six months to seven years.

Convicted were: 350 persons of British or American origin, one Italian and four Chinese. One narcotic offender was deported to the United States, one to China and one to New Zealand.

Important Cases

An automobile chase by R.C.M. Police lead to the capture, at Toronto in July, of three individuals, one of whom had a container of 75 capsules of heroin in his mouth. He was sentenced to two years in the penitentiary and, in addition, a heavy fine.

Also in July, a Vancouver hotel operator was caught as he was about to board an airplane at Montreal, with a substantial quantity of heroin. He was convicted and fined, and his arrest led to the breaking up of a ring of drug handlers in Montreal. The leader of the gang was sentenced to five years, for this offence, and to an indeterminate period as an habitual criminal.

A member of the clergy associated with the narcotic traffic in Montreal was sentenced to concurrent terms of two years imprisonment on each of five

charges. The alleged leader of his "syndicate" absconded while on \$12,000 bail, but two other alleged accomplices were awaiting trial at the end of the year on charges of possession and conspiracy.

Residents of Toronto, Hamilton and Vancouver were involved in an important case made by R.C.M.P. narcotic officers after more than a year's work in tracing the movement of heroin between Eastern and Western Canada. This case involved an elaborate cipher system covering the distribution of narcotics. Simultaneous police raids in Toronto and Vancouver resulted in the arrest of ten said to be concerned, and to the discovery of a large cache of heroin. Five of those arrested were given seven year sentences. The others were acquitted.

Legitimate Trade

The licensing system maintained by the Narcotic Control Division continued to function efficiently in maintaining control over the import, export and distribution of legitimate narcotic supplies. Granted only to approved wholesalers, these licences restricted the distribution of narcotic medication to other wholesalers, physicians, druggists, veterinary surgeons, dentists and hospitals. Such transactions were permitted only by individuals in good standing with their provincial associations or colleges, or by responsible officials of wholesale firms, on the strength of signed and dated orders or requisitions.

By a system of monthly sales reports from wholesalers, the division kept a record of narcotic sales made in Canada and was aware, at all times, of such trading by all authorized to engage in it.

No new drugs, synthetic or otherwise, were added to the Schedule to the Opium and Narcotic Drug Act during the year, but the incorporation in it of all derivatives of Demerol and Methadone was contemplated.

The acquisition and distribution of narcotics was handled by 150 licensed wholesale firms, only a few of which, however, were concerned in importing them. A total of 113 import licences were issued during the year.

Revenue to the department from licences, fines and seizures was \$23,417.69, while expenditures for legal fees and court costs amounted to \$44,236.08.

Retail Control

Officers of the R.C.M. Police acted on behalf of the department in the inspection of the records of virtually all Canadian druggists, in connection with the requirement that complete records of purchases and disbursements of narcotics must be maintained at all retail outlets.

This control was supplemented by reports from the druggists themselves, direct to the Division, on all sales of narcotics. The Division was thus in a position to enquire into cases indicating an abnormal use of narcotics and, in many instances, to uncover addicts not previously known, as well as their sources of supply. In most instances, the division required two such reports from druggists covering different three-month periods of the year.

Registrars and officials of associations in the pharmaceutical field co-operated with the division and equally fine assistance was extended by physicians, retail druggists and other professional people concerned with narcotics.

Stock Audit

Narcotic auditors employed by the Department inspected methods of narcotic control in 548 hospitals, audited the stocks and records of 118 wholesalers and held interviews of a special nature with 78 firms or individuals having narcotic problems.

The senior auditor made two trips to Newfoundland to interview provincial officials, narcotic wholesalers, druggists and hospital authorities there in the interest of extension of the division's control to the new province.

A fourth class of instruction was held during the year by the narcotic auditors for R.C.M.P. officers engaged in inspection work at drug stores. The practical value of such courses was demonstrated in the increased efficiency and understanding reflected in reports from these officers.

Analyses and Tests

Dominion analysts checked shipments of oriental medicines and questionable packages for the R.C.M. Police and customs officers engaged in narcotic enforcement. In some instances such analysis forestalled delivery in Canada of medication containing narcotics.

Saliva tests of representative horses were continued by the R.C.M. Police at important race meetings. While there were no positive reactions, this check was believed to have had an important psychological effect on certain persons.

International Co-operation

The closest co-operation was maintained with other countries, particularly from the standpoint of fulfilment of obligations under international narcotic conventions, as well as in order to maintain a constant internal supply of narcotics for Canada. This latter was important, since Canada does not produce nor manufacture narcotics and is dependent wholly on imported basic narcotics for domestic uses.

A great deal of statistical and general information was submitted by the division to various international supervisory bodies, inasmuch as Canada has ratified all the conventions relating to narcotics.

Estimates of this country's narcotic requirements were supplied annually to the control authorities and quarterly reports were made to them on imports and exports. In addition, reports were made on some 60 Canadian criminal cases involving narcotics. Such an interchange of information contributed materially to the effectiveness of control which Canada maintained over drugs.

Details of imports and consumption of narcotics and of convictions under the Opium and Narcotic Drug Act are contained in Tables 23, 24 and 25 pages 135, 136 and 137.

NUTRITION

In its work of evaluating national nutritional problems, assisting in their solution and initiating and encouraging programs designed to improve the nutritional status of Canadians, the Nutrition Division carried on numerous projects during the year.

Surveys were made to evaluate the nutritional status of families in a Nova Scotia fishing community and of school children in an Ontario Health Unit. The Nova Scotia survey, covering 220 persons, was completed late in 1949. Some 900 children were included in the Health Unit study. In both studies the department's Research Division assisted in selection of the samples. All participants kept weekly diet records at two seasons of the year and received medical and dental examinations. Associated biochemical tests were performed by the division's laboratory staff.

A more restricted survey was carried out in a Micmac Reserve school in Nova Scotia, at the request of the Indian Affairs Branch.

A large group of related families with several cases of optic atrophy, and more than 70 potential cases, was the starting point for preliminary investigations, in the Ottawa area, of possible sociological and nutritional factors in the development of blindness. By the end of the year more than 40 of these people had received clinical examination, including extensive haematological and biochemical studies.

The division also supplied a new service to physicians and others lacking equipment required to examine blood specimens for vitamin A, carotene and ascorbic acid. One provincial laboratory submitted 60 specimens for a group of children suspected of vitamin A deficiency.

Indian Schools

By the end of the school year in June 1949 fairly complete information had been obtained on food supplies in each of six representative Indian Residential Schools. A five-year study of nutrition in these institutions was launched in 1948 in cooperation with the department's Dental Health Division and Laboratory of Hygiene and the Indian Affairs Branch.

On the basis of data respecting the 960 children concerned, plans were made for special measures to be taken in each school from September 1949 to June 1950. The plans, which differ, include (i) extra vitamin C in tablet form, (ii) a special flour, (iii) an intensive nutrition education program for staff and children, (iv) another special flour, (v) control and (vi) doubled milk intake.

In connection with the education program, nutritionists visited the school to give guidance and assistance. The co-operation of the staff was gratifying. The school in which milk consumption was to be increased uses dried milk exclusively. Prior to the school term recipes and methods for incorporating extra milk in cereals and puddings, as well as in the menu, were developed in the division. The two schools using the special flours both bake their own bread. The school using the vitamin C supplement receives the tablets free and a controlled experiment is being carried out with them. Medical and dental examinations of the children will be made at the end of the 1950 school year.

Experimental Kitchen

Established to satisfy a definite need, and not duplicating the work of other such kitchens in Canada, an experimental kitchen went into operation in the division in June 1949. Its object is to assist institutions such as hospitals etc., in developing recipes and working methods for their special requirements.

Projects already under way in the kitchen include, (i) improvement of a milk-choc drink for Newfoundland school children, by increasing the skim milk powder and decreasing the sugar, (ii) production of an acceptable bannock mix containing skim milk powder, in order to assure that Eskimos get a certain amount of milk in their diet, (iii) adjustment of recipes used at Indian Residential schools to ensure that children get their daily milk requirement, (iv) use of a taste-panel for testing some of the prepared foods for the *Arctic Ration* pack, and (v) testing large-quantity recipes.

Civil Servants

To assist the Civil Service Health Division, one afternoon per week was set aside for appointments with government personnel referred by Nursing Counsellors for nutritional advice. Under this plan, 40 civil servants were given clinical and biochemical examinations, including blood tests and urinalyses for thiamine, riboflavin, niacin, glucose and albumen.

Educational Materials

In co-operation with the Information Services Division, educational materials were produced for and in consultation with provincial nutritionists and others.

A new publication, *Meals for One or Two*, was printed and several other new items were mimeographed and issued. To meet continuing demand, the division revised and reissued *Healthful Eating* (English), *Good Red Blood* (English and French), *How Well Fed Are You?* (English and French), *If You Serve Food* (English), *The Lunch Box is on the March* (English and French), *Mother, the School Lunch* (English and French), *Canada's Food Rules* (English and French) and *Camp Feeding* (English and French), as well as the filmstrip *Rural School Lunches*.

Four manuals on quantity food service operation were completed and one, *100-Serving Recipes for Men doing Heavy Work*, is now being distributed. The others, for distribution in 1950, are *Cook and Cookhouse*, *Food Purchasing and Storage* and *Quantity Food Preparation and Care of Equipment*. The *Table of Food Values Recommended for Use in Canada* was revised and is to be reprinted.

Articles on school lunches were sent regularly to provincial nutritionists for use of teachers, nurses, etc., and items were provided for the department's press and radio educational services.

Monthly, the division issued *Canadian Nutrition Notes* to 8,000 readers in the nutrition field, *Bulletin to Caterers*, for food service operators and *Just between Cooks*, for cooks in Indian Residential schools. The first issue of Volume Two of *The Bulletin on Nutrition*, organ of the Canadian Council on Nutrition, contained the new Canadian Dietary Standard.

Miscellaneous

The division received numerous requests for information, many requiring technical research. Assistance was asked in connection with the layout and equipment of kitchens and with group feeding in schools, hospitals and other institutions.

New methods and techniques tried in the laboratory involved, among other subjects, serum iron, B vitamins in urine, pH measurements in the oral cavity and photometric red cell counts.

The division was represented on the Foods Committee of the Canadian Government Specifications Board for Arctic Army Rations.

Provincial programs and nutrition education were discussed at the seventh meeting, in March, of the Dominion-Provincial Nutrition Committee of the Canadian Council on Nutrition, which continued to function as an advisory body to the Minister.

PUBLIC HEALTH ENGINEERING

Activities of the Public Health Engineering Division continued to increase and requests for professional services and advice were numerous during the year. There were no additions to staff and the death in January of Mr. G. H. Edgcombe, who had rendered valuable service to the division, was a distinct loss.

Sanitation

More than 500 sanitary surveys were made in regard to water and ice sources and sanitation generally. Collected from common carriers engaged in international and interprovincial traffic, some 5,000 water samples were

submitted for bacteriological analysis. The examination of railway stations, restaurants and bunkhouses, inaugurated this year, added to the work of the division. Reports were made on 103 bunkhouses and 60 restaurants. Co-operation received in effecting improvement in this field was most encouraging.

International Joint Commission

Investigation of pollution of boundary waters, particularly of the Niagara River, continued to form a prominent part of summer activities in the Ontario region. Field work was completed early in July and there remained only the assembling of data and preparation of the final reports.

More than 4,800 chemical and bacteriological determinations were made during the year.

A report covering the pollution reference of the boundary waters from Lake Superior to Lake Erie was submitted to the International Joint Commission in October.

The report for the amended reference concerning the Niagara River from Lake Erie to Lake Ontario was completed and is to be submitted to the Commission during 1950.

Oil Pollution

The seriousness of oil pollution in Lake Ontario led to a conference with the major oil companies operating fleets of tankers on the Great Lakes, and with officials of the Ontario Government, in an effort to arrive at some solution of this problem.

Co-operative Projects

With the continued development of the Northwest Territories, there was a corresponding increase in the demand for services of the division in the many and varied problems related to water supply, sewage disposal and sanitation generally. Requests for design of sewage and water supply systems were numerous and every effort was made to co-operate as fully as possible with other federal departments on problems of mutual concern.

During the year the Province of Newfoundland received special consideration and, on request, a comprehensive survey was made of sanitary conditions in and around the community of Bell Island.

Shellfish Control

Field activities related to control of shellfish areas increased, due, in part, to an agreement between the United States Public Health Service and this department establishing control measures in the handling and export of shellfish. The recognition of duly certified exporters by the respective government agencies stimulated interest of the shellfish industry.

During the year, apart from routine examinations of shellfish shucking plants, 76 sanitary surveys were made of the growing areas.

Advisory Committee

The Advisory Committee on Public Health Engineering held its inaugural meeting at Ottawa in January. The meeting was attended by representatives of engineering divisions of provincial health departments all over Canada.

Detailed discussion covered all phases of environmental sanitation and much valuable information was presented at a round-table conference. Continued progress, resulting in closer co-operation with provincial organizations, is anticipated.

Information.—Publications of this division continued in good demand and three posters on subjects of sanitation, produced during the year, were heartily endorsed by public health officials.

QUARANTINE, IMMIGRATION MEDICAL AND SICK MARINERS SERVICES

Continuation of the post-war movement to this continent from older lands made increasing demands during the past year upon the services maintained by this department to insure the selection of healthy immigrants and minimize the danger of importation of infectious disease, as well as to provide medical care at Canadian ports for passengers of incoming vessels and aircraft as well as for seamen.

The rising popularity of flying as a means of long-distance transportation necessitated increased attention to air ports of entry, especially Gander, in Newfoundland.

QUARANTINE SERVICE

The Quarantine Service, oldest health activity of the Dominion Government, functioned for the purpose of preventing the entry of infectious disease into Canada from without, through traffic arriving by water, air or the inland boundary, under authority of "An Act Respecting Quarantine" and the Quarantine Regulations.

Vessels were inspected on arrival during the day and at night on request. Radio pratique was in effect, except for arrivals from the Orient. Aircraft were inspected on arrival, day and night at the major airports.

No cases of smallpox, typhus, yellow fever, bubonic plague or cholera were found on board vessels or aircraft on arrival at Canadian ports, although these diseases were present in the countries from which many had departed. All persons coming from smallpox areas were required to show evidence of immunity from the disease or submit to vaccination on arrival. Sixty-two cases of minor infectious disease, with 25 contacts, were reported.

During the year, a total of 2,794 vessels, having on board 282,920 persons, were inspected by the medical officers of this Service. Of this number, 159,286 were members of crews, 123,385 were passengers and 249 were distressed seamen and others.

A total of 932 vessels were inspected for vermin and rodents. Of these, 635 had come from plague-infected ports. Fumigation was carried out on 108 vessels; 355 were granted exemption certificates and 356 had their certificates endorsed. A total of 344 rats and 209 mice were recovered.

In addition to the fumigation of merchant vessels, officers of this Service, on request of the respective departments, fumigated various ships and shore establishments of the Royal Canadian Navy, the Marine section of the R.C.M. Police, the Marine Branch of the Department of Transport, Pilotage Service, and the Immigration Branch of the Department of Citizenship and Immigration.

During the year, 133 vessels applied for duplicate pratique and 1,935 radio pratique.

Local Customs Officers, in their capacity as Quarantine Officers at unorganized ports, reported entry of 283 vessels.

Additional duties were carried out, as usual, by the Service's medical officers, such as medical examination of pilots, light-house keepers, radio operators serving in remote areas, and other civil servants; immigration medical examinations and the treatment of sick mariners.

Draft Quarantine Regulations for Air Travel, in relation to the International Sanitary Convention for Aerial Navigation, 1944, which were prepared previously, received further consideration. A definite quarantine service has been set up at Gander Airport in Newfoundland. Dorval Airport, near Montreal, is a fully organized sanitary airdrome. Satisfactory arrangements

have also been made for medical inspection, when necessary, of aircraft arriving at Sydney, N.S., Moncton, N.B., Malton Airport, near Toronto, Ontario, Sea Island, near Vancouver, B.C., and at Harmon Field, Stephenville, Newfoundland.

Aircraft, including their passengers and crew members, were subjected to Quarantine inspection on arrival from Overseas, as follows:

Gander, Newfoundland	698
Harmon Field, Newfoundland	92
Sydney, N.S.	81
Moncton, N.B.	2
Dorval, P.Q.	509
Malton, Ont.	181
Edmonton, Alta.	33
Sea Island, B.C.	133

International Certificates of inoculation and vaccination have been published in booklet form for distribution to persons travelling abroad. These have been in great demand, especially during the latter half of the year under review. Official approval has been given to agencies at which yellow fever and other inoculations may be given and certified by the Service on the International approved forms. There are now 13 centres extending across Canada where such services may be obtained. A total of 993 inoculations against yellow fever were carried out during the year.

IMMIGRATION MEDICAL SERVICE

The Immigration Medical Service supplied medical advice to the Immigration Branch, Department of Citizenship and Immigration, with regard to physical and mental condition of applicants for immigration. In the majority of instances, prospective immigrants were examined by the Overseas Medical Service of the Department before embarking for Canada. They were subject to further medical inspection on arrival at the Canadian port of entry. If the immigrant had not been examined previously by the Canadian medical service overseas, a complete medical examination was carried out at the Canadian port of arrival. As a result of the advice of the department's medical officers, the Immigration Branch was then able to determine whether or not the individual concerned should be prohibited from entering Canada for medical reasons.

Immigration hospitals were maintained at the principal ports of entry, in order to provide observation, for diagnostic purposes, and treatment for immigrants on their arrival, if such was found necessary. These hospitals were well equipped and a high standard of medical practice was maintained.

With overseas headquarters in London, England, at 42-46 Weymouth Street, the Immigration Medical Service had full-time Canadian medical officers stationed in the United Kingdom at London, Glasgow and Liverpool; on the Continent, in Paris, Brussels, The Hague, Rome and also in Germany and Austria. In the Occupied Territories, doctors of the Service accompanied Immigration examining teams dealing with Displaced Persons.

In addition, there were 598 roster doctors in the United Kingdom, at Dublin, Eire, Oslo, Norway, Stockholm, Sweden, Copenhagen, Denmark, Warsaw, Poland, Prague, Czechoslovakia, Athens, Greece, Lisbon, Portugal, Belgrade, Yugoslavia, Berne, Switzerland, Malta, and in New Delhi, India, Karachi, Pakistan, Hong Kong, and Shanghai, China.

All immigrants were required to have an X-ray examination of the chest before entry to Canada was approved, except those coming from the United States, New Zealand and Australia. A total of 2,453 X-ray films were referred



Newcomers from overseas were checked by immigration medical authorities to ensure that disease was not brought into Canada.

to Ottawa, and 132 of the individuals concerned were certified. A large number of cases have been certified because of pulmonary tuberculosis. This was a result, in large measure, of routine X-rays of the chests.

In Canada 78,762 immigrants were medically inspected on arrival at ocean ports. A total of 80,105 prospective immigrants were medically examined overseas. Medical re-examinations of 17,331 individuals were made before a final decision was rendered as to their condition. In addition, 18,645 non-immigrants were given careful medical supervision on arrival. A total of 1,964 individuals were refused permanent admission to Canada as a result of these examinations in the British Isles, in Canada, and on the Continent.

Patients of the Department of Veterans Affairs, of the Indian Health Service and of the Sick Mariners' Service were treated at Immigration Hospitals at Quebec and Halifax.

The medical officers of this Service in Canada also assisted in Quarantine and Sick Mariners work and performed examinations for the Civil Service Health Division, the Department of Transport and other Government Departments. Persons proceeding to radio stations and light-houses in remote areas received preventive inoculations.

A summary of activities of the Immigration Medical Service, details of examinations and details of certifications and disposition of cases, both at Canadian ports and Overseas will be found in tables 33, 34 and 35, pages 142 and 143.

SICK MARINERS' SERVICE

Out of a total crew membership of 92,652 on vessels at Canadian ports, the Sick Mariners' Service provided treatment this year for 24,823, which was a considerable increase over the previous year.

Part V of "An Act Respecting Shipping", which has existed, with various amendments, since 1867, provides medical and surgical treatment of all members of the crews of those vessels paying dues under its authority. Dues are levied and collected by the Collector of National Revenue on every ship arriving in any port of the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland, Quebec and British Columbia, and at ports in Manitoba and Ontario, on Hudson Bay and James Bay, provided the ship does not come within one of several exemptions.

A high standard of general medical practice is provided at all ports in the provinces named, where there are customs officers legally competent to administer the Act. Treatment is free for a period of one year, if needed. No expense is spared in providing the best specialist medical, surgical and hospital care, when required. Wherever possible, a choice of hospital is permitted.

Conditions under which treatment is obtained are kept as simple as possible. The sick seaman applies to the captain of the vessel, who sends him to the local Collector of Customs with a written statement setting forth his employment period on the vessel and giving details regarding payment of sick mariners' dues. Concise forms are provided for this purpose. The Collector verifies these facts and, if satisfied, refers the patient to the doctor or hospital previously nominated for this purpose. Emergency cases are taken direct by ambulance from ship to hospital.

During the year a number of Indian patients were hospitalized in the Marine Hospital at Sydney, N.S. These Indian patients were referred to the hospital by an Indian Agent and the Indian Health Service.

Details of sick mariners' treatment and of vessels, dues and expenditures will be found in Tables 36 and 37, pages 143 and 144.

LEPROSY

Both of Canada's leprosaria have been making full use of the newer drugs available for treatment of this disease, and favourable results have been obtained in certain early cases.

Bentinck Island, B.C.—Two patients were in hospital, one remaining from last year, the other admitted during the year. Both were Chinese males and were under routine care and treatment.

Maintenance of equipment has been carried on at this Station in anticipation of the time when immigration from the Orient returns to normal, with the resumption of former shipping services. Relative information follows:

Remaining from last year	1
Admitted during the year	1
Died during the year	0
Released during the year	0
Remaining in hospital	2

Tracadie, N.B.—The leprosarium at Tracadie is a new and modern wing of the Hotel Dieu de St. Joseph Hospital. The Division pays the hospital for the care of leper patients on a per diem basis. The quarters are very suitable for the purpose for which they were designed. A total of 12 beds are available.

One of the seven patients in hospital died during the year and there was one admission, leaving a total of seven. Four of these were considered as under active treatment and showing signs, to a variable degree, of active leprosy. The other three were considered as arrested cases. Four of the patients were males and three were females. Three were of French-Canadian origin, two of Russian ancestry (one Canadian born), and two Chinese (one Canadian born). Particulars are as follows:

Remaining from last year	7
Admitted during the year	1
Died during the year	1
Discharged during the year	0
Remaining in hospital	7

TUBERCULOSIS AND VENEREAL DISEASE CONTROL

In its role of providing leadership in fighting both tuberculosis and venereal disease in Canada, the Tuberculosis and Venereal Disease Control Division continued to stress all effective measures directed toward those ends.

Major activities of the division included the administration of certain aspects of the National Health Program's Venereal Disease Control Grant as well as of its Tuberculosis Control Grant, these being conducted in consultation with the Directorate of Health Insurance Studies.

V.D. Control

In addition to participation in the National Health Grants Program, venereal disease control activities included:

- (a) development and distribution of V.D. educational material and other informational activities;
- (b) continuing review of ex-Service personnel syphilis documents and maintenance of permanent summaries of such case histories;
- (c) preparation and distribution of the Quarterly Statistical Report on Venereal Disease in Canada;

- (d) provision of assistance and participation in the Fourth Western Canada V.D. Conference, and
- (e) increasingly close liaison with Provincial V.D. Control bodies and on an international basis.

Federal Grants

During the fiscal year 1949-50, the pre-existing separate V.D. Control Grants were united to form a total of \$517,544 for all provinces. Distribution was made on the basis of a flat grant of \$4,000 to each province, the remainder according to population.

Funds were provided on a matching basis and in the year's operation expenditures were made up to 95.2 per cent of the total allotment. Major activities in all provincial programs included such items as extension of treatment services through the provision of free penicillin, payment of fees to physicians for diagnostic and treatment services, support of free clinics and provision of personnel and special equipment for certain of these clinics and provincial administrative establishments. Also covered were extension and improvement of laboratory services, extension of epidemiological and educational activities as well as provision of technical and scientific equipment, and similar procedures.

Education

During the course of the year considerable effort was extended toward the development of a manual dealing with the diagnosis and treatment of syphilis and gonorrhoea for use by the practising physician. This is expected to be published in 1950.

Additional supplies of the lay information booklet, "V.D.—What You Should Know", were prepared and distributed as well as a variety of informational material previously developed or obtained from other sources and made available to the provinces.

Service Personnel Records

In the continuing review of ex-Armed Forces personnel documents, records for Army and Air Force were concluded and those for Naval personnel well advanced. Informal reports from provincial sources have indicated that this review and the maintenance of case history summaries at the central office is most helpful in the follow-up of these patients.

Quarterly Statistical Report

The statistical report initiated four years ago from reported incidence figures on venereal disease provided by Provincial Health Departments to the Dominion Bureau of Statistics was continued. This report is distributed to the Provincial Health Departments at quarterly intervals as well as to other interested agencies and it represents the most complete compilation of such figures available.

During 1949 for Canada as a whole 25,598 cases of venereal disease were reported, consisting of 8,131 syphilis and 17,439 gonorrhoea cases. As compared with the previous year 1,893 fewer cases of all types of venereal disease were reported, an improvement of 7 per cent. Total syphilis was reduced by 776 cases or 9 per cent and gonorrhoea decreased by 1,108 cases or 6 per cent.

Other Activities

The Chief of the Division and the Medical Consultant participated in the Western Regional V.D. Conference held in Vancouver. At this meeting matters relating to the utilization of the Federal Grant, surveys of provincial programs, epidemiologic procedures, educational activities and matters relating to the diagnosis and treatment of venereal disease were considered.

Visits were made to all provinces at various times during the year and meetings of the American V.D. Society and the National Institute of Health Symposium on V.D. held in Washington, as well as the American Regional Conference of the International Union against Venereal Disease were attended. Continuing close liaison is maintained with the V.D. Control Division of World Health Organization and other international agencies.

Tuberculosis Control

Under the Tuberculosis Control Grant, the sum of \$3,389,847 was provided for 1949-50. The method of distribution and utilization was unchanged from the first year of operation of the grant.

In all, 196 projects were approved representing the allocation of \$2,769,766 or 81.7 per cent of the total. Of this an amount of \$2,426,962.38 or 71.6 per cent of the total was expended.

Activities

Some of the more outstanding projects carried on under the grant were as follows:

- (a) Extension of detection services centering chiefly around the routine hospital admission chest X-ray examination and mass survey activities, including the use of mobile units and performance of specific surveys. The hospital admission procedure was intensified in practically all provinces and for all purposes an amount totalling better than \$950,000 was made available.
 - (b) In the field of institutional care and treatment of tuberculosis emphasis was placed upon the purchase and free provision of the drugs, streptomycin and para-amino salicylic acid. In all provinces projects were submitted and the total approved expenditure was \$425,000.
 - (c) The purchase of technical and scientific equipment, other than X-ray equipment and educational materials, represented a commitment of approximately \$200,000.
 - (d) Specific projects aimed at the improvement and extension of laboratory services in tuberculosis were undertaken in six provinces.
 - (e) Rehabilitation in the field of tuberculosis showed progressively increasing growth as indicated by the approval of projects dealing with this activity in eight provinces.
 - (f) Projects were approved in eight provinces providing for the extension of educational activities on various aspects of tuberculosis.
 - (g) In three provinces eleven clinical research studies are being conducted on diagnostic and treatment problems in tuberculosis.
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HEALTH INSURANCE STUDIES

Administration of the National Health Program of grants, and fundamental studies on health insurance and related matters, were responsibilities of the Health Insurance Studies directorate.

When the National Health Program was inaugurated in May, 1948, it represented the first tangible step taken in Canada towards the preparation of a nation-wide health insurance plan. This program, which provides annual grants to the provinces in excess of \$30,000,000 for the immediate extension and improvement of their health services, made considerable progress during the year towards the laying of a foundation upon which a national health insurance scheme might be built.

With the assistance of the grants, the provinces steadily strengthened and extended their health facilities and hospital accommodation, so that, across Canada, there was emerging a network of basic health agencies adequately manned by trained personnel. The National Health Grant Program stood out as Canada's assurance that any scheme of hospital and health insurance inaugurated in this country would rest on the firmest of premises.

Administration

Fundamental administrative functions and over-all control of the National Health Program were performed by the director, while detailed examination of projects submitted by the provinces was carried on with the assistance of appropriate federal health divisions. In addition, the director was responsible for inauguration and general guidance of studies on basic approaches to health insurance.

Appointment of two assistant directors in 1949 and expansion of the administrative staff greatly facilitated the work of the directorate.

Provincial reports submitted on the utilization of the grants built up a picture of the health situation across Canada. Analysis of this material has been one of the major objectives of the directorate.

Plans Studied

Investigation was carried on continually into the medical, financial and administrative aspects of health insurance plans operating in England, Australia, New Zealand and Continental countries. Developments in the field of social medicine in the United States were closely observed and analyzed. Plans were formulated for a nation-wide statistical study to determine the incidence of sickness and disease in Canada. When completed, this survey will make available accurate up-to-date information of the utmost importance in planning for a Canadian scheme of health insurance.

By such methods, Canada was keeping abreast of advances made throughout the world in the field of social medicine, so that, when the time arrived, any scheme adopted in this country would embody the latest improvements and developments and, in so far as possible, avoid the now apparent errors of countries which pioneered in this field.

In addition to such studies, plans for the inauguration of medical care and hospitalization pre-payment schemes were under constant consideration.

Health Survey Grant

In view of the necessity of taking inventory of Canada's existing health facilities and making recommendations for their extension and improvement, the Health Survey Grant was considered basic to all others in that it allowed

the provinces to assess the magnitude and urgency of the need for greater health and hospital facilities within their own borders. The information thus obtained was used to ensure that funds received under other grants were utilized effectively, taking into account local needs and the state of existing facilities.

Interim reports on the findings and recommendations of the provincial survey committees were received by the directorate, were analyzed and integrated, so that a picture of the basic health facilities of Canada was obtained. This comprehensive evaluation of Canada's present establishment was of fundamental importance, inasmuch as it formed the only logical basis for planning for future development.

The Health Survey Grant is a non-recurring allotment, originally set at \$625,000, to assist the provinces in studying their health and hospital needs. During 1949-50, some \$490,000 was available, representing the residual portion of the original \$625,000, plus an added amount of \$20,000 for Newfoundland.

Hospital Construction Grant

Provincial action under the hospital construction grant has been especially vigorous. Whereas it was originally hoped that these grants would result in the addition of some 40,000 new hospital beds when the five-year program was complete, construction has proceeded so rapidly that, by the end of the fiscal year, half the ultimate goal had been accounted for by projects submitted up to that time. Accordingly, it is now anticipated that, when the five-year program reaches completion, Canada's bed complement will have been augmented to an extent appreciably in excess of that originally envisaged.

During 1949-50, the sum of \$13,334,629 was available to the provinces for hospital construction, the money being allotted to specific building projects on the basis of \$1,000 for each active treatment bed and \$1,500 for each chronic or convalescent bed.

General Public Health Grant

Having as their objective the strengthening of public health services generally in those areas where the provincial authorities felt such was necessary, funds under the General Public Health Grant were utilized for a variety of services including: development of new health units and extension of services in existing units; extension of laboratory services and immunization programs; dental care, including the establishment of dental health divisions and dental hygiene clinics; environmental sanitation and public health engineering services; health education—employment of health educators, provision of visual aid equipment, publications, etc.; child health—school medical services, well-baby clinics, prematurity services, etc.

Under the General Public Health Grant, \$5,276,000 was available to the provinces in 1949-50, which was an allotment of 40 cents for every man, woman and child in Canada.

Mental Health Grant

Under the Mental Health Grant provision was made to extend facilities for the treatment of mental disorders. This included preventive action in the community itself. Programs of mental hygiene and instruction are now doing much to prevent mental illness and the work of the guidance clinics in this respect was most important.

With the assistance of this grant, 30 mental health and guidance clinics have been established and are being maintained across Canada. Additional staff and equipment have been supplied to mental hospitals in all provinces.

More than 700 mental health personnel were employed during 1949-50, including psychiatrists, psychologists, mental health nurses, psychiatric social

workers, mental health instructors and a variety of other workers whose services were considered necessary for adequate care of the mentally ill. In addition, more than 300 mental health personnel received professional training in their various specialties, under this grant.

All will return to service throughout the provinces in the field of mental health, where the benefits of their additional training will accrue to patients placed under their care.

Under this grant, \$4,122,171 was available to the provinces, divided on the basis of \$25,000 flat grant to each province, with the balance according to population.

Crippled Children's Grant

This grant concerned care of crippled children, a crippled child being defined as a person under 21 years of age who, because of accident or defect, was restricted in normal muscular movement. Services provided ranged from the establishment of clinics and training centres to professional training of nurses and therapists in the care of handicapped children.

A number of the provinces made provision for hospital care, training and rehabilitation of crippled children, and in some cases utilized the administrative facilities of such organizations as the Junior Red Cross and the Western Society for Physical Rehabilitation. Children suffering from poliomyelitis and cerebral palsy were eligible for benefits under terms of the Order in Council covering this grant, and major portions of grant money were devoted to alleviation of disease caused by these diseases.

Under the Crippled Children's Grant, \$515,944 was divided among the provinces on the basis of \$4,000 to each, the balance according to population.

Professional Training Grant

Provinces were enabled to recruit and train more public health and hospital personnel by virtue of funds provided in the Professional Training Grant. This was accomplished by the provision of bursaries to provide academic instruction to selected individuals, and by the establishment of special training programs at universities and other centres.

Because of the serious shortage of trained personnel in every health field, the needs of the provinces could not be met wholly through the operation of the professional training grant alone. Accordingly, approval was given for professional training in various fields under grants appropriate to the type of instruction. For instance, a large number of psychiatrists were given training under the Mental Health Grant, as it was felt that their added knowledge would represent a direct and tangible benefit in the field of mental health when they returned to service in the provinces.

In all, some 1,400 health personnel received training during 1949-50. This figure included 155 physicians, 79 psychiatrists, 42 psychologists, 62 mental health nurses, 50 psychiatric social workers, six dentists, 32 sanitary engineers, 75 sanitary inspectors, 120 technicians, 399 nurses of various specialties, and numbers of nutritionists, therapists, hospital administrators, bacteriologists, nursing aides, veterinarians and others.

During 1949-50, sums totalling \$515,944 were available to the provinces on the basis of a flat amount of \$4,000 per province and the remainder according to population.

Public Health Research Grant

This grant had as its objective the stimulation and development of public health research. To make the grant as effective as possible and, further, to permit of fundamental research projects which might exhaust the total grant

or a substantial portion of it, these moneys were not allotted to the provinces but, with the approval of the Dominion Council of Health, were apportioned for special research projects which were submitted by the provinces on behalf of some institution or body.

On this basis, 48 investigations and studies were afforded financial aid to assist them in carrying their work to a successful conclusion. Projects were received from every province except Newfoundland and, though highly diversified as to nature and objective, all strove towards a common end, namely, new knowledge or discoveries which are expected to be of value to Canada in the health field.

Cancer Control Grant

The purpose of the Cancer Control Grant was to assist the provinces in improving their efforts in the cancer control field, in order that there might ultimately be established, in every province, an adequate program to ensure that no person suffering from cancer would lack the necessary assistance.

In three provinces, with full-scale cancer control programs, federal funds were applied directly to those programs, to expand and render more efficient the control and treatment measures initiated. The other provinces utilized their allotments for specific projects, such as the establishment of cancer diagnostic clinics, extension of free treatment, purchase of radium and radiotherapy equipment for hospitals and, in some cases, for professional training of personnel in cancer cure methods.

The sum of \$3,590,000 was available to the provinces under this Grant, in 1949-50.

Venereal Disease Control Grant

This grant was utilized by the provinces to strengthen and expand their own venereal disease control programs. These programs provided for establishment of venereal disease clinics for diagnosis and treatment, lay and professional education, case find and case holding, free laboratory services, free consultative, diagnostic and treatment services, provision of drugs and compiling of statistics dealing with venereal disease.

Under the Venereal Disease Control Grant, \$515,944 was available to the provinces, on the basis of a flat amount of \$4,000 per province, the remainder according to population.

Tuberculosis Control Grant

Extension of free treatment, including sanatorium and post-sanatorium care, was made possible by this Grant.

Free treatment, by the use of streptomycin, was greatly expanded and efforts were made to completely rehabilitate patients released from sanatoria by training and reorientation procedures to assist discharged patients in leading useful lives in the community.

An outstanding factor of the preventive programs was the inauguration and wide-spread application of mass x-ray survey measures, by supplying x-ray equipment to hospitals and clinics for routine examination of all admissions and by establishing travelling units to carry out surveys among the generally-well population.

Available to the provinces this year under this grant was \$3,176,614 on the basis of a flat \$25,000 to each province, the balance divided 50 per cent on the basis of population and 50 per cent on the average number of deaths from tuberculosis in the province over the preceding five-year period.

FOOD AND DRUGS

Observance of the 75th anniversary of the passage of the first Adulteration Act, this year directed public attention, as never before, to federal services ensuring the safety of consumables. "Open Houses" were held at all regional Food and Drug offices across Canada and thousands of interested persons took advantage of the opportunity of seeing scientists at work and of learning at first hand how the department maintained standards for imported food, drugs and pharmaceuticals.

In co-operation with the Information Services Division, a country-wide information project was co-ordinated with events marking the anniversary. Considerable publicity was given to the occasion by the press, the radio and publications, and premiere showings were arranged of films dealing with work of the Divisions.

Two illustrated publications dealing with food and drug work, *Pure Food-Safe Drugs* and *Canada Pioneers in Food and Drug Control*, were widely distributed and a 75th anniversary number of the Divisions' house organ *The Food and Drug News*, contained photographs of members of the staff from coast to coast.

On March 16, approximately 100 representatives of the divisions, other branches of government, the United States Public Health Service, the food and pharmaceutical industries and others, were guests of the divisions at an anniversary dinner at Ottawa. The Minister of National Health and Welfare told the gathering that it implied "recognition of meritorious service" on the part of all concerned in keeping Canada's food and drugs safe.

Other speakers included Dr. Leonard A. Scheele, Surgeon-General of the United States, who brought congratulations from his government.

Both the Minister and the Director mentioned the great loss to the public service in the death, a short time previously, of A. Linton Davidson, an assistant to the Director, who had been closely associated with arrangements for the anniversary observances. Bound copies of a special book *The Genesis and Growth of the Food and Drug Administration in Canada*, prepared by Mr. Davidson, were presented to guests at the dinner.

The Director's reminder, in the anniversary edition of *The Food and Drug News*, that detection of adulteration was no longer merely a matter of "looking for wooden nutmegs" was borne out by the year's activities of the divisions.

Enforcement

The Laboratory and Inspection Services checked a total of 89,026 items of foods and drugs of which 29,213 were examined in the laboratories and 59,813 were released through customs after examination by inspectors without being referred to the laboratory.

In most cases the Divisions succeeded in their primary aim to secure compliance with requirements of the Act and Regulations by giving advice to those seeking it or warnings to those who inadvertently violated the law. No definite figure can be given of the number of cases handled in this manner but it runs into the thousands. Unfortunately, this type of action was not always sufficient and court action or seizure sometimes was necessary.

The imposition of a total of \$1,899.60 fines and costs resulted from 25 court cases concluded successfully. In addition, 23 cases were settled out of court by tender and acceptance of a total of \$855.

A total value of some \$35,000 was involved in 39 seizures. Among these was a shipment of 27 tons of fish which had been contaminated by copper in an

improperly cleaned railroad car. A lot of various drugs that had been contaminated with sewer water and two lots of penicillin lozenges that were considerably below the labelled potency were destroyed.

The work on cream-style corn initiated last year was continued and extended to include factory inspection during the corn canning season. The quality of the finished product showed improvement over that found the previous year, which may have been due, in part, to better climatic and crop conditions. The factories were advised regarding means of improving sanitary conditions.

The regulations dealing with food colours were carefully considered in consultation with the trade and a new set was prepared with a view to permitting more effective control of this commodity. Some food colours which did not comply with existing standards were seized and destroyed.

Considerable attention was given to the examination of soft drinks. In spite of the fact that there was no longer any scarcity of sugar, some bottlers still used saccharin and it was found necessary to prosecute them.

Sausage was another commodity which required continual attention. It was frequently adulterated by the addition of preservative (usually sulphur dioxide) or colouring matter, or by the use of an excess of cereal or of water. Many of the manufacturers were warned that they must comply with the regulations and a number of them were prosecuted.

The United States refused entry to a shipment of Canadian maple syrup which had been found to be adulterated with white sugar. Conferences were held with the Quebec and Federal Departments of Agriculture with a view to devising means for controlling adulteration of maple products, which appeared to be widespread.

The regulations requiring that certain drugs be sold on prescription only appeared to be disregarded by certain druggists. Two of them were convicted and fined and a number of other prosecutions are being prepared.

Although urethane, used for a considerable time for its anesthetic action and also in the treatment of leukemia, was restricted to administration under immediate medical supervision, one manufacturer began marketing a syrup of urethane for use as a cough remedy. In view of the potential hazards of self-medication with this drug, it was added to Appendix IV to the Food and Drug Regulations in order that it would be used only on medical prescription.

All the laboratories continued to carry on considerable analytical work for other departments, more particularly the Department of Agriculture and the Royal Canadian Mounted Police.

On the other hand, the Food and Drugs Directorate was dependent to a considerable extent on the co-operation of other departments for the effective enforcement of the Food and Drugs Act and this co-operation has been given wholeheartedly. Outstanding in this respect has been the help accorded by customs officials throughout Canada. As a result of conferences between customs and food and drug officials in Ottawa a plan was put in force which assures the closest possible liaison and co-operation between the field officers of the two services throughout the whole country.

Advisory Boards and Committees

Meetings were held during the year of the Advisory Board on Proprietary or Patent Medicines and of the Canadian Committee on Pharmacopoeial Standards. Consultations were held with various members of the Advisory Panels on Foods and Drugs who have advised the Divisions on contentious problems of a technical nature.

Co-operation with the United States Pharmacopoeia Revision Committee and the British Pharmacopoeia Commission has consisted of supplying technical information and advice and carrying out laboratory work as described in the reports which follow of the Laboratory Services.

The Committee on Biological Standardization of the World Health Organization was supplied, on request, with information on standards and methods of assay.

The Technical Committee of the Canadian Pharmaceutical Manufacturers Association and other manufacturers' groups were consulted on technical questions in preparation for amendments to the Regulations under the Food and Drugs Act.

Consultations have also been held with the Association of Canadian Distillers and the technical committee of the Provincial Liquor Commissions on matters pertaining to alcoholic beverages.

The Canadian and International Standards used in biological testing have been distributed on request to manufacturers and research institutions in Canada.

INSPECTION SERVICES

Labels, Advertisements. Inspection Services reviewed 9,867 English and 2,886 French radio commercials, 619 folders, 220 newspaper advertisements, 2,985 labels and 887 cartons.

Again, the high level of co-operation afforded by the manufacturers and advertisers concerned was most gratifying. As in the past, many labels were submitted voluntarily for an opinion in spite of the well-understood fact that the Act does not provide for any formal approval. In a number of instances, where changed requirements of the regulations demanded label revisions, arrangements were made to permit the using up of stocks in hand in order that there should be no waste or loss. Since the correction of most infringements was satisfactorily negotiated, there were few prosecutions.

One of the Divisions' more important actions concerned an advertised treatment for obesity. The treatment purported to be a dietary plan, with which the Food and Drugs Act did not seem to be concerned as no food or drug was sold or offered for sale. With the dietary plan, and bearing the same name as the plan, tablets were sold as a dietary supplement providing a few vitamins and minerals. The Divisions submitted that the public could hardly escape the impression that the tablets took part in the claimed reducing effort, an erroneous impression in view of their composition, and the Court concurred in the charge that section 32A of the Act was thus violated.

Because, in addition, advertisements overtly included the tablets as working wonders for fat people, a conviction was also secured under section 6A of the Act. In giving judgment the magistrate said, in part, "It is quite obvious that the accused intended that persons following the diet would, in losing weight, attribute their improvement to these tablets. It is hard to conceive of any respect in which the advertisement could have been more fraudulent than it was". It should be mentioned that the recommended reducing diet was a good one; so good that it was difficult to see the necessity for supplementing it with vitamins or minerals.

Obesity was included in the schedule of afflictions for which a treatment should not be offered to the general public because of the inherent dangers of unsupervised self-treatment.

Another important judgment was secured against a man who, in spite of stern warning and a thorough explanation of the law, persisted, by rather devious means, in soliciting customers for a worthless drug for tuberculosis. The departmental inspectors, aided by the Post Office and National Revenue

Departments, successfully untangled operations that the man had probably hoped could not be traced. In finding this man guilty the magistrate said, "In my opinion any man who will try and play upon the mental attitude of some person suffering from tuberculosis is making one of the meanest tricks I can imagine . . . I cannot imagine anything more contemptible".

Inspectoral. Following the advent of graduate inspectors it was possible and profitable this year somewhat to increase the scope of inspection operations, relieving in part the more central offices of direct responsibility for certain phases of the work, thus decentralizing it to an increasing extent and permitting the laboratory staffs to assume more analytical work.

At one time all vacancies in the inspectoral staff were filled, but at April 1, 1949, the chief inspector in the Western Region retired from the service. This vacancy was filled, by promotional competition, after the usual six months of retiring leave was ended, but the vacancy thus caused has not yet been filled.

Inspectors continued to make visits to radio broadcasting stations. These visits have been productive in promoting cordial relations with station managers and in securing good coverage of the field.

Shortage of staff, over the years, has prevented any inspection, other than that which could be described as opportunist, of factories where foods or drugs were being made and packed. While the sanitary condition of a factory is not a matter at present dealt with under the Food and Drugs Act it is a condition that can be reflected in the cleanliness or even the safety of the final product as it is marketed. In a food factory insect and rodent infestation can contaminate the food from the factory. With the co-operation of Dr. H. E. Gray, Chief, Stored Products Insect Investigation, Department of Agriculture, a basic course upon insect and rodent infestation was given to a selected inspector from each region. These men have trained their colleagues.

New inspectoral districts have been established at Windsor, Ontario, and St. John's, Newfoundland, and a former one at Saskatoon, Saskatchewan, has been reopened. No office has been secured at Windsor as yet, and the Act is not yet proclaimed in Newfoundland; the respective inspectors have been in training, however, and are ready to take over at once.

Information Centre. Because of the imperative necessity of keeping all officers outside of Ottawa fully informed, so that uniformity of enforcement is possible, the information centre referred to last year was set up. This unit collects pertinent information, sorts and files it and relays it to the field man. It is also responsible for the dissemination of Trade Information Letters, of which some 19 were despatched during the year to the appropriate sections of the food and drug industries.

The actual number of pieces mailed totalled some 25,000 and evoked a striking interest from the recipients. One of the most interesting was concerned with the labelling and advertising of antihistaminics for colds. Because the manufacturers co-operated to the full with Inspection Services, Canada was not faced with the situation that developed elsewhere, the public were not denied the benefits that might be expected from these medicines and were not exposed to unwarranted claims.

The revised Food and Drug Regulations to which reference was made in last year's Annual Report were duly promulgated and despatched. Some 12,000 copies have been distributed, including very many sent in response to requests. Because the Regulations are not static, both the Act and Regulations were set up as office consolidations in a loose-leaf cover so that amendments could be inserted as received by the addressees. This has proved to be an economical way of proceeding. To assist the user, tables of contents, an explanatory preface, indexes and foot-notes have been incorporated. The format of the Regulations was completely revised and included a novel system of numbering that has proved to be quite successful.

The food and drug industries have shown a great interest in the Regulations and have contributed many valuable suggestions. The inspectors have continually been called upon to point out changes and to explain their import. Their activities and responsibilities have correspondingly increased.

LABORATORY SERVICES

Food Chemistry

The work in the Ottawa laboratory was confined chiefly to investigational projects and surveys of food products on the Canadian market. The research involved the development and the testing of methods, since satisfactory methods are a prime requisite of the analyst. The surveys covered a number of food products on the Canadian market and had as their objective (a) the accumulation of information for the setting up of new standards, and (b) the collection of data in regard to the condition and composition of products offered for sale at the present time.

Antioxidants. Processors are permitted to add small amounts of specified materials to lard and shortening in order to inhibit oxidation of the fat and thus prolong the shelf-life of the product. However, since the amounts are limited by regulation, it is necessary to have satisfactory quantitative methods for their determination. A sensitive colorimetric procedure has been developed for the determination, individually or in combination, of four of these compounds. It is possible, with this method, to determine accurately a few parts per million of these substances in lard and shortening.

Honeydew. A number of samples of authentic honey and honeydew were analyzed in order to determine the possibility of detecting honeydew by distinctive chemical characteristics.

To the beekeeper, honeydew is a specific type of *honey* which is deposited in the combs by the bees. Its source is not floral nectars or other sweet exudation of plants but is usually the secretions of plant aphids and scale insects. The product is similar in composition to honey but usually has a strong molasses-like flavour and a dark colour, reminiscent of buckwheat honey.

It was found that all samples of honeydew had a much higher ash and dextrin content than honey. A number of samples of amber honey offered for sale on the retail market were also examined but these were all found to be pure products.

Extraneous Matter in Flour, Cheese and Canned Corn. The battle to eliminate extraneous matter from food products continued. Methods for the separation of rodent and insect filth from flour and baked goods were examined and the most satisfactory selected for use. These methods will be employed in conjunction with factory inspection in an attempt to eliminate unsanitary conditions from the mills. A number of samples of flour sold on the retail market were found to be free of extraneous matter of any kind.

During the year an occasional sample of Canadian cheese was refused entry to the United States. The presence of extraneous matter was given as the reason for this action. A survey was, therefore, initiated and a total of 86 samples of Cheddar cheese from the cheese-producing areas of Ontario and Quebec were examined. Although the majority of the samples were satisfactory, several were found to contain insect fragments and mites were found in an appreciable number of samples. Mites are tiny insects which find their way into the cheese during manufacture or storage and, unless the infestation is very high, would not be detected with the naked eye. Steps are being considered to reduce this infestation.

As in previous years, canned corn was examined for the presence of corn borers and other foreign matter.

Metallic Impurities. A survey was made of the heavy metal content of canned shellfish and other crustaceans sold in the Canadian market. A total of 120 samples were analyzed and, with the exception of one sample of clams having five parts per million of lead, one sample of lobster having 13 parts per million of lead, and one sample of lobster having seven parts per million of arsenic, the values found were not significantly above the limits established for the heavy metal content of foods.

While gelling agents are used only in food products in relatively small amounts they could be the source of appreciable quantities of poisonous metals. Some of these metallic contaminants, the most important of which are arsenic, lead, copper, and zinc, may come from the raw materials and some from the manufacturing process.

In order to ensure that the present limits are in line with the best manufacturing processes, a large number of samples have been analyzed for metallic contamination. Results to date indicate that in all cases, except zinc, the present limits can be met without difficulty. However, an appreciable number of samples contained larger amounts of zinc than the present limit. The investigation is being continued to determine if a change in the regulation is required.

Fill of Containers. In connection with the provision of the Food and Drugs Act that a product shall be deemed to be misbranded if the package is deceptive with respect to fill, the best method of measuring the volume of free-flowing products, such as tapico and rice, has been studied in order that the volume of the contents can be compared to the total volume of the container.

A number of factors, such as packing of the material during transit, filling of packages with automatic machines, and variability in settling due to size of the individual particles, had to be taken into consideration. Several hundred determinations were carried out and a promising method is being developed.

Sausages and Meat Products. A collaborative study on methods for the determination of moisture in meat products was conducted with the co-operation of all regional laboratories across Canada. Methods for the determination of cereal in meat products were also studied.

Figs, Fig Paste, and Dates. The study of methods of sampling and examination of whole figs was carried on throughout the year. On the basis of the results obtained the methods for bulk and packaged figs were revised. Collaborative examinations with the regional laboratories were conducted on whole figs in an attempt to develop greater uniformity in the techniques of the various analysts.

Collaborative Work. Collaborative work was carried out on the recovery of DDT from cream and butter using methods supplied by the associate referee on this subject of the Association of Official Agricultural Chemists. This project had as its object the development of more reproducible methods for the determination of DDT in food products.

Pharmacology and Toxicology

Arsphenamines and Related Products. The number of lots of arsphenamines submitted for assay during the year decreased considerably. It was quite evident that other drugs were replacing the arsphenamines to some extent for the treatment of venereal disease.

During the year a method for the assay of oxophenarsine hydrochloride, based on a graded response technique, was worked out. This method was found to be quite satisfactory for this product. It has the advantage that a test may be completed in one day.

A new standard for neoarsphenamine was obtained during the year. Following the checking of this lot against the International Standard, it was released for use.

Cardiac Drugs. An attempt was made to work out an assay method for the digitalis whole leaf products based on survival time after a single injection of digitalis.

Collaborative work was undertaken with the U.S.P. Revision Committee, Biological Standards Division, and A.Ph.A. Committee on Physiological Testing. This collaborative work involved the testing of a new U.S.P. Standard for heparin, International Standard for digitalis and a lyophilized posterior pituitary Reference Standard.

Enzyme Studies. A new line of research was opened up by the establishment of a project in enzyme pharmacology. The objective is the elucidation of the mechanisms of drug actions and the application of this information to the development of enzyme assays for drugs where present methods are not entirely satisfactory. This approach may also produce valuable information on the therapeutic efficiency of particular drugs and on methods for counteracting drug toxicities. Antabuse (tetraethylthiuram disulphide) was chosen as the first drug to be investigated. The effects of this material on various dehydrogenase systems of animal tissues is being studied. A method for the chemical assay of antabuse in microgram quantities has been developed in conjunction with the investigation. In addition, some experimental work on the therapy of severe antabuse-alcohol reactions *in vivo* have been conducted.

Epinephrine Inhalants. A survey was made of racemic epinephrine hydrochloride solutions sold on the Canadian market. Steps were taken by Inspection Services to see that manufacturers made appropriate declarations on their labels.

Epinephrine Free from Arterenol. A number of comparative assays were carried out on lots of epinephrine free of arterenol and epinephrine standard which is known to contain from 10-20 per cent arterenol.

Hydrolyzed Calcium Gelatinate. This diluent has been reported to prolong the action of several drug products, and it has been recommended as a diluent for morphine, penicillin, certain vitamins and sex hormones.

An investigation was carried out concerning the comparative activity of morphine, d-tubocurarine chloride and oestrone.

Lithium Salts (Lithium Citrate and Lithium Chloride). A chronic toxicity study on lithium salts was completed during the year. A number of feeding studies of several months duration were carried out on rats, guinea pigs, and rabbits.

Analgesic Testing. Some of the methods used for testing analgesics were studied during the year and involved a good deal of investigation.

Assistance was given to the Narcotic Control Division in determining the analgesic potency of new compounds, some of which were reported to be non-habit-forming.

Vasopressin. The inclusion of standards for vasopressin in both the United States and British Pharmacopoeias necessitated a further study of proposed methods for this product. This investigation is not yet completed.

Miscellaneous. There were a number of complaints during the year about products, some of which were reported to have caused deaths, others symptoms of intoxication. These were all investigated and in most instances animal feeding tests were done. There was not a single case, as far as could be ascertained, where the product was at fault.

Assistance was given the Department of Agriculture in the assessment of some toxicological data on insecticides.

Ottawa hospitals were also given assistance on a few occasions in working out analytical methods.

Routine biological assays were carried out during the year on the following drug products: arsenical products, curare alkaloids, digitalis whole leaf products, digitalis glycosides, epinephrine products, heparin, local and general anaesthetics, pituitary extract (posterior lobe), oxytocin and vasopressin.

Physiology and Hormones

Anterior Pituitary Hormones. The marked advance made in the production and clinical use of the adrenocorticotrophic hormone (ACTH) in a number of diseases during the past year required this section to spend considerable time and effort in the preparation of a standard and on the assay of the hormone. Through the co-operation of a local packing house, anterior pituitary glands from approximately 7,000 hogs were collected, extracted by recognized procedures and $4\frac{1}{2}$ grams of a purified preparation were obtained.

Preliminary work on the physical and chemical constants and potency evaluation of this standard shows the preparation to be quite comparable to other purified preparations. Work is in progress on modification of assay procedures and pharmacological properties.

Adrenal Cortical Hormones. The discovery of the clinical effectiveness of a hormone of the cortex of the adrenal gland (cortisone) in rheumatoid arthritis and allied conditions necessitated gaining experience in the assay of this hormone and a study of the pharmacology and physiology of hormones of the adrenal glands. Work is in progress on the study of assay procedures and tests on experimental screening of different steroids of the adrenal glands for their claimed effectiveness.

Insulin. Research work was continued on the variables affecting the assay of this hormone with particular reference to globin insulin with zinc which has been introduced recently to the Canadian market. Efforts were also made to obtain more reliable and practical methods of assay for the zinc and nitrogen content of insulin products.

Sex Hormones. A method of assay for testosterone propionate worked out in this section last year has been adopted for inclusion in United States Pharmacopoeia XIV. Participation in a collaborative study with the U.S.P. Revision Committee showed the method to be satisfactory.

Collaborative work was carried out with the U.S.P. Revision Committee on proposed methods of assay for gonadotrophins and oestrogens.

Following work last year on the effects and recovery of ingested stilbestrol compounds in the flesh of poultry, further work was done this year to determine the effects of prolonged administration of these products on experimental animals.

Surveys of market samples of androgens, cosmetic creams containing oestrogens and progestins were completed. A study of a new colorimetric method for the assay of progesterone was made.

Vitamins and Nutrition

This section continued to participate in collaborative studies with the Association of Official Agricultural Chemists in the microbiological assay of folic acid, with the United States Pharmacopoeia in the microbiological assay of vitamin B₁₂, and with the Pacific Fisheries Experimental Station in work on the chemical assay for vitamin A. Methods have been outlined in detail for use among the regional laboratories of the Food and Drug Divisions for collaborative assay of vitamin A in fish oils and capsules and of vitamin C in pharmaceuticals and fruit juices.

During the year vitamin analyses were carried out for many different governmental agencies and other organizations, including the Inspection Board of Canada, Canadian Commercial Corporation, the Department of National Defence, and the Department of Veterans Affairs. The laboratory has also analysed samples for the Nutrition Division and the Indian Health Services of the Department.

As a result of the close liaison with the United States Pharmacopoeia this laboratory has had opportunity to check and study new lots of U.S.P. standards for purity and general suitability. These standards included pyridoxine, menadione, and para-amino-benzoic acid.

The regulations have been amended to include vitamin B₁₂, pantothenyl alcohol and synthetic vitamin A. All these are new vitamin sources which have appeared on the market within the last year.

Vitamin A. Both biological and chemical procedures for the estimation of vitamin A are being investigated. Studies on factors affecting the results of biological assays for vitamin A are also being made.

Vitamin D. Investigations have been continued on the relative merits of the line test and the radiographic method for assessing calcification.

Vitamin E. A survey has been completed in which 41 different preparations from 26 companies were analysed for vitamin E and examined for labelling. More than half of the available products were preparations of natural mixed tocopherol acetates. Other products were made up of natural mixed tocopherols and of synthetic alpha-tocopherol and alphanatocopherol acetate. With the exception of seven companies, all products showed good agreement with labelled potency. Some thirteen products were incorrectly labelled. The chief factor causing difficulty in the potency and labelling of vitamin E preparations seemed to be a misunderstanding of the various forms of tocopherols and their physiological relation to each other.

Vitamin E methods, both biological and chemical, are cumbersome and time-consuming. An effort is being made to develop and simplify these procedures.

Since existing chemical methods are tedious and time-consuming, a simpler and more direct method of determining the alpha-tocopherol content of pharmaceutical products is sought. The results of this study were presented before the Research Seminar of the Chemical Institute of Canada.

Vitamin B₁₂. The vitamin B₁₂ situation has been followed very closely in collaboration with the Anti-Anaemia and Vitamin Advisory Boards of the United States Pharmacopoeia, and this laboratory took part in the first U.S.P. collaborative study.

Pharmaceutical Chemistry

Ephedrine and Other Sympathomimetic Amines. This section was opened in the latter part of October, 1949. A survey was begun on the various methods of assay of ephedrine, the commercial preparations of ephedrine and related products. Results of the assays of commercial preparations showed that improved methods of assay are required and a new colorimetric method has been developed.

At present, assays are being made on the various types of commercial ephedrine preparations on the market by use of this method. It is too early to predict what degree of success will be attained.

A colorimetric method for the assay of privine has also been developed, but it has not yet been possible to adapt this method of assay to the commercial preparation. Further work will be done in an effort to produce a colour chart which may provide means of distinguishing between the various sympathomimetic amines.

The Antihistaminics. Investigational work was begun on the antihistaminics.

Miscellaneous. The task of proofreading the proposed United States Pharmacopoeia XIV was carried out in this section and a copy of the proof returned to the Committee on Revision.

A number of drug preparations were received from the Department of Veterans Affairs and Central Medical Stores for purposes of analyses. The qualitative and quantitative analyses of all such preparations received were completed and reports submitted.

One of the preparations received for routine analysis was labelled Amino-phyllen Tablets, but chemical analyses and pharmacological tests showed it to be a barbiturate which was believed to be phenobarbital. The manufacturer was immediately notified and the entire lot was recalled by the firm.

Some tests were conducted on tablet disintegration time on a few commercial preparations. Some of them were found to be entirely unfit for use. The manufacturer was notified in each case and the particular lots were recalled.

Certain compounds were assayed for the Standards Committee on the United States Pharmacopoeia XIV.

Organic Chemistry and Narcotics

Investigations undertaken in this section dealt mainly with the separation, identification and other chemical reactions of narcotic drugs which can be classified as follows: (1) Natural Raw Products—opium, coca leaves, marijuana; (2) Manufactured Drugs—morphine, codeine, thebaine and metopon; (3) Synthetic Drugs—amidone, demerol, morphinane and their analogues.

Opium. In co-operation with other countries, parties to the International Opium and Narcotic Conventions, Canada is participating in a plan of research to develop methods for identifying the country of origin of opiums by chemical and physical means. In Canada, work is being carried out with the full help of the Narcotic Control Division in the Organic Chemistry and Narcotic Section, and in the Department of Pharmacology, University of Toronto. The main object of the work is to take opium apart chemically, swiftly and more accurately to see how the *pieces* of the different kinds from different countries compare.

A study is also in progress to increase knowledge of the fundamental chemistry of opium alkaloids. This information is essential for better understanding of the whole problem of the determination of country of origin of opium.

Identification Studies. Rapid development of new narcotics has been achieved throughout the world since 1939. This research has been conducted along two lines to achieve a synthesis of morphine and to find a substitute for morphine which will attain its analgesic potency and not have its harmful physiological side reactions.

As a result of this work several hundred new analgesics have been synthesized and are now available, such as demerol, amidone, heptalgin, pipidone, metopon and morphinane. These drugs all have addiction-liability and are now covered by International and National Narcotic Laws. This makes it essential for those engaged in chemico legal work to have means of identification.

Micro chemical reactions for the identification of metopon have been published by this section, and for the identification of synthetic narcotics, amidone, heptalgin, pipidone and demerol. Other work in identification of narcotics is in progress.

Consultative Duties. One of the main reasons for organization of the organic chemistry and narcotic section is to act in a consultative capacity on

technical aspects of existing narcotic problems and in the field of organic chemistry. One such problem is the revision of the narcotic schedule and advice has been given to the Narcotic Control Division for this purpose.

As part of the lecture course conducted by the Narcotic Control Division for R.C.M. Police officers, instruction was given in narcotic identification by chemical tests which are useful in the field. The officers are equipped to distinguish narcotic drugs from other materials encountered in their normal course of duties.

Extended Investigation of Routine Samples. From time to time samples were submitted, usually by the Narcotic Control Division, for further work, i.e., (1) to check on results already obtained on previous analysis, (2) to establish types of adulteration, (3) to increase the information where further knowledge about the sample is required. These samples were not classed as routine but as applied research investigations.

Routine Sample Analysis. Suspected narcotics seized in the Ottawa region are analysed in this section. In 1949, 91 samples were submitted for analysis and of these nine were positive and required certificates. This is few in comparison to the number of narcotic analyses handled by the regional laboratories and leaves time for the accumulation of the fundamental knowledge necessary in designing identification tests for new synthetic narcotics.

Cosmetics and Alcoholic Beverages

Work carried out on cosmetics during the year fell into two categories (1) investigations relating to methods of analysis, partly in collaboration with the United States Food and Drug Administration, and (2) examination and analysis of commercial samples.

In the first category came collaborative studies on the determination of glycerol and certain glycols in skin lotions, and the composition of lipstick colours. In the second category were reviews of depilatories and hair colourings, and the examination of miscellaneous single samples. A number of depilatories were examined in connection with the investigation of a new preparation for which unorthodox claims were made. Apart from this particular preparation, nothing new was noted.

Hair colours were also reviewed, mainly because some of them were being put forward as *hair-growers* or *dandruff removers*. Practically all of the well-known colouring agents were represented. It was pointed out to a number of manufacturers that the claim to restore natural colour to hair was not permissible.

Alcoholic Beverages. The section dealing with alcoholic beverages continued the review of domestic wines begun last year and analyses of some fifty wines are now on file.

Food Colours. The colour section has prepared revised regulations applying to food colours. The application of newer methods including polarography have been studied in connection with the determination of trace metals.

Biophysics

A study of the accuracy of gauges indicating delivery of anaesthetics from anaesthetic gas machines which was commenced last year was completed and a report submitted. As it was impossible to retain the services of the physicist in this section the work was temporarily suspended.

Biometrics

This section was organized in August 1949, for the purpose of providing advice on the statistical aspects of the work done by the Food and Drug Divisions.

The most urgent need was for a revision of the sampling schemes used in the examination of lots of bulk food products, such as dried fruits, nuts and canned goods. Procedures were outlined and tables computed for the sampling of figs and dates, which were designed to provide an adequate basis for action under the Food and Drugs Act.

Other problems dealt with by the section since its establishment concerned the design and analysis of biological and chemical experiments. The Food Chemistry and Vitamin and Nutrition Sections, for example, were aided in the planning and analysis of collaborative studies between the regional laboratories on the examination of food products such as figs, dates, raisins, and prepared meats, and vitamin A preparations. The Pharmacology and Toxicology Section was advised on certain aspects of their biological assays of digitalis and pituitary extract.

The facilities of the section were also made available to other divisions and departments of the government service on request. A course of lectures on the use of statistical methods is being given. The section was also approached by the Army Medical Corps for help in the analysis of some data.

PROPRIETARY OR PATENT MEDICINES

In administering legislation controlling all secret formulae proprietary medicines, the Proprietary or Patent Medicine Division was instrumental this year in raising the standard of such medicines and in eliminating undesirable products. Care was taken to see that ingredients used in formulae had value for purposes for which they were recommended and to ensure that drugs were within reasonable safety limits fixed by an advisory board.

Registrations of 3,731 preparations were reviewed. Of 302 new medicinals submitted for registration, 173 were registered and 129 refused, so that a total of 3,904 licenses were issued for the year.

With the object of giving the public truthfully labelled and advertised products, 2,046 labels, wrappers and newspaper advertisements were examined and approximately 10,500 radio commercials, submitted prior to broadcast in accordance with Canadian Broadcasting Corporation regulations, were reviewed to check on exaggerated, misleading or false claims.

Many manufacturers were interviewed and assisted in preparing their applications, revising radio script and other forms of advertising. In general, they were co-operative, having found that regulations were helpful in improving standards to which proprietaries must conform and thereby increasing public confidence in reputable products.

The advisory board continued to review and decide whether the medication of liquid medicinals containing alcohol in excess of 2½ per cent was appropriate and sufficient to render them unfit for use as alcoholic beverages, and to advise on and fix dosages for scheduled drugs.

A close check was kept on new drugs, new combinations and new knowledge respecting the action and uses of old drugs. These drugs are given careful consideration by the department's medical officers and technicians and by the advisory board, who decide what products may be used with safety and prescribe limitations, where deemed appropriate.

The medical officers and the advisory board opposed the use of lithium salts and the antihistamines in proprietary medicines and prohibited preparations containing carbolic or acetylsalicylic acid for internal use of children under one year.

INDIAN HEALTH SERVICES

While operating a departmental network of hospitals, nursing stations and other health centres, and providing or arranging for active treatment of disability among the Indians and Eskimos of Canada, the Indian Health Services continued, during the past year, to carry on a vigorous program of public health work.

On occasion, it was necessary to pursue not only the program but its beneficiaries, since the degree of self-discipline demanded by modern medical care is unfamiliar to the nomad. In the pursuit, medical officers and nurses of the Service had occasion to use every modern means of transport and some which are strange to the more settled areas. In many far-off places in Canada, the dog-drawn sleigh and komatik, freight canoes and freight cabooses, saddle and carry-all, are still the only vehicles available or practical, even in this atomic age.

As Indian Health work expanded, so did the population to be served. In spite of regular losses to the general population, either by imperceptible assimilation or by enfranchisement of some 500 persons per year, the native population was increasing. According to the 1944 Census, there were then 125,686 Indians and 7,700 Eskimos in Canada. The birth rate varies greatly in different groups but, on the average, is about 45 per 1,000. The death rate varies similarly but may be said to be about 15 per 1,000. It is estimated that, in 1950, the Indian population will be about 136,000 and the Eskimo about 8,500.

Facilities

For the health care of the native peoples, the department maintained 21 hospitals, providing 1,877 beds and 66 bassinets, 22 nursing stations with 84 patient beds, and 58 other health centres, from which medical officers or graduate nurses ministered to the inhabitants of the surrounding areas.

New facilities established during 1949-50 included Sioux Lookout Indian Hospital, of 64 adult beds and six bassinets, nursing stations at Fort Chimo and Port Harrison, in the Ungava district of the province of Quebec; Big Trout Lake in northwestern Ontario, God's Lake in Manitoba, Lake Harbour, southern Baffin Island, and a seasonal dispensary at Barriere, Que.

A field nurse was established at Pointe Bleue, Que., and another at Fort St. James, northern British Columbia, a medical officer at Punnichy, Sask., and additional field nurses at Sarnia, Ont., and Whitehorse, Y.T. In addition to the staffs in departmental hospital and nursing stations, there were, in the field, 23 full-time medical officers, five dental surgeons and 43 graduate nurses.

Clothing this framework of departmental facilities, arrangements existed with private practitioners, community hospitals, provincial health services and lay dispensers to assist in the work of the service. Some 64 physicians and 16 dispensers occupied part-time positions, but the bulk of professional attention was provided by practitioners receiving fees-for-services. Accounts were received regularly from 1,250 physicians, 125 dentists and 600 hospitals, but the numbers treating native patients from time to time were much larger. Supplies of medicines and dressings were provided to all outposts and Indian groups and were dispensed by a host of missionaries, traders, police and other officials, who embrace the health care of the natives within their compassion.

Canada's Indian Health Service is unique in that it has arisen, not from legislative obligation, but rather as a moral undertaking to succor the less fortunate and to raise the standard of health generally. Because of the great dispersal of the Indians, and even wider dispersal of the Eskimos, the provision of trained medical assistance to all of them would be prodigal, even if sufficient

ould be found. The outer fringe of the service must, therefore, consist in lay persons whose sense of humanity, even more than their sense of duty, is enlisted. Without these voluntary lay dispensers, the service would remain a skeleton only.

Accomplishments

Departmental establishments alone admitted some 8,500 Indians and Eskimos for treatment this year. The number under treatment in non-departmental hospitals was 23,500. The patient days of treatment were in the order of 600,000 and the number of out-patient treatments and home visits is known to have been well over 60,000.

Considered of even greater importance was the preventive and case-finding work. It is the aim of the service to reach every native child and to maintain full protective inoculation against the common communicable diseases. To this end, the staff is augmented each summer by as many extra nurses as can be attracted and 22 selected students of medicine were used in the past year.

The summer months are the harvest period for this work for, at this time, the annual official visit is paid to those Indians who are in treaty, and all Indians are more likely to be congregated, for business or festival, at certain known dates. The Eskimos, likewise, linger about the trading posts in summer because it is a poor time to travel or hunt and because the arrival of the supply vessels present splendid opportunities for reunion. Advantage is taken of these customs, by placing medical officers and survey groups on the larger northern vessels.

Indian Health Service has pioneered in the practical extension of vaccination against tuberculosis by the Bacillus Calmette-Guerin vaccine. In this fiscal year well over 4,000 native children were inoculated by departmental officers. In addition, a number of hospitals in Quebec, Ontario and New Brunswick vaccinate Indian babies routinely.

Case finding—in particular for tuberculosis—continued to be a major part of the service's program. Tuberculosis is known to be many times more prevalent among the northern Indians and the Eskimos than among other groups. Case finding is of the greatest value, not only in getting known cases out of circulation and under proper care, but in indicating groups requiring prior attention.

During the past year more than 60,000 chest plates were taken by the Service. Each departmental facility was a centre for this work and there were eight mobile teams in operation during the summer of 1949. In addition, a proportion of community hospitals now film all new admissions and these, as well as the mass of information collected by provincial health organizations, all contribute to the case finding program.

Improvement of Facilities

While new treatment centres were being established, there was a steady process of metamorphosis to increase the internal efficiency and capacity of existing institutions, resulting in an over-all addition of 215 more treatment beds. There was a concomitant improvement in staff accommodation, an item of major importance in a service operating mainly at a distance from the ordinary amenities of urban life.

A considerable portion of the larger treatment centres were former Department of National Defence hospitals. Built under stress of war, they lacked services and utilities adequate for permanent full-capacity use. Gradually, however, proper power and laundry services are being added and such projects were completed at Miller Bay, near Prince Rupert, and at Fort Qu'Appelle, Sask. Another was in progress at Charles Camsell Indian Hospital, Edmonton. The 155-bed hospital at Moose Factory, Ontario, approached completion at an

accelerated rate. Also under construction, but not completed, were five health centres in Ontario and Quebec and a 30-bed hospital at Norway House, in northern Manitoba.

Tuberculosis

The death rate from tuberculosis, in the white population, in 1948 was 32.4; among Indians it was 480.1 per 100,000 of population. In 1947, the Indian rate was 549.8. Preliminary figures indicate that the decline between 1948 and 1949 will be in the order of 30 per cent—tangible evidence that strenuous case finding and expanding treatment facilities are producing striking results.

Ten years ago, about 100 Indians were under active treatment for tuberculosis. In January 1950, there were 2,248. There is still much to be done, but vigorous health education and a raised standard of living are expected to smooth the way. Authorities see nothing to indicate that the Indian and Eskimo are not as sturdy as any other stock. But there is reason to believe that a changing way of life, without accompanying appreciation of good health habits, can result in high morbidity.

During the year 1,300 patients were admitted to departmental sanatoria for treatment of tuberculosis. Another 1,100 were treated in provincial institutions. Streptomycin, and streptomycin with para-amino-salicylic acid therapy, have produced striking changes. Modern chest surgery has been even more dramatic. All such advanced treatment methods are used to the limit of trained personnel.

In Charles Camsell Indian Hospital there were 149 major chest operations and 26 on bone and joint. In the departmental hospitals in Manitoba, the figures were 50 and 53. The number of pneumothorax and pneumoperitoneum treatments were in the order of 7,500 and 11,000 respectively.

This advancing therapy has changed the whole aspect of the disease, as far as Indian Health Services is concerned. Whereas, ten years ago, the departure of an Indian to a sanatorium was accepted as a death sentence, in the past fiscal year more than 2,000 have been discharged from treatment with the disease under control. This demonstration of improved prognosis has converted a formerly resistant and hostile native attitude to one of active co-operation. Now, Indians come hundreds of miles to knock at the door of institutions already filled beyond rated capacity.

Epidemics

The usual incidence of common communicable disease was observed generally this year. In two instances these assumed epidemic proportions. In the area of the Mackenzie River delta, centering on Aklavik, there were 300 cases of measles in December, through February, in a population of some 2,500. There were 14 deaths. Measles is a more lethal disease among natives because they are extremely difficult to restrain once convalescence commences and, in a rigorous climate, a proportion fall prey to sequelae. As is almost invariably the case in the Far North, the disease was introduced by a white visitor.

In northeastern British Columbia, about Halfway River, there was an epidemic of diphtheria, affecting 54 out of a population of 90. Although these people had received sporadic inoculations, they were not fully protected for, being nomads, the only way to accomplish full protection would have been to follow them for the necessary number of weeks. Staff could not be spared, of course, for every group of this nature. Occurring in December and January of an exceptionally severe winter, the epidemic imposed a formidable task on the nursing service. Nevertheless, the work was carried out in such a manner that the departmental nurse, as well as her provincial counterpart, received the first two British Columbia Provincial Medallions, in recognition of "service above and beyond the call of duty".



From nomadic bands on far-off trap-lines, native people brought their troubles to nursing stations, health centres and hospitals of the Indian Health Service.

Professional Information

While Indian Health Services does not engage directly in research, both the directorate and the field officers were aware of the potentialities within the native population and, by close co-operation with scientific groups, encouraged investigations on health problems. In this connection, for the past two summers, a medical research group from Queen's University Medical School has carried on work among the Eskimos at Coral Harbour, on Southampton Island. During the summer of 1949, a parasitologist from the University of Toronto visited Lake Harbour, Baffin Island. Both investigations were given practical assistance and both are expected to return.

Officers of the Service were encouraged to attend all local professional and scientific conferences. Hospital and field nurses attended courses on public health, control and treatment of tuberculosis, etc. Within the provisions of existing authority, refresher courses were arranged for a number of medical officers and nurses.

Departmental officers were authors of an article on trachoma and a very comprehensive report on the epidemic of poliomyelitis among the Eskimos of Chesterfield Inlet, in 1948-49. Departmental hospitals entertained both professional and lay groups and staff members addressed similar groups to explain the work carried on by the Service and the experience which had been accumulated. Through such exchanges, understanding and co-operation flourished and much benefit accrued to patients and staff.

Educational Publicity

The dissemination of public health education to Indians and Eskimos encountered language difficulties, but full advantage was taken of visual aids, through selected moving pictures and filmstrips, accompanied by suitable commentary. This often had to be translated through an interpreter. Posters were used effectively, with inscriptions in syllabics, adapted for both Indians and Eskimos. Calendars, illustrating points on health and the proper use of Family Allowances, received wide distribution.

The larger sanatoria circulated a hospital paper, for the entertainment and instruction of the patients. In the Far North, the wide use of radio by Indians and Eskimos presented opportunities which were grasped by medical officers and nurses, and short talks on medical subjects were regular features at some local stations. The radio was used extensively, also, for passing advice and for advertising the proposed visits by medical officers, nurses or medical survey groups.

Co-ordination of Facilities

Assuming commitments in every remote segment of the country, Indian Health Services was keenly aware of the need for that close integration with other health agencies without which its task would be impossible. Facilities were exchanged with the treatment services of the Department of National Defence and the Department of Veterans Affairs, at many points. The Signal Services of the Department of National Defence and of the Department of Transport, as well as commercial licencees, were used extensively all over the North. The transport facilities of the United States Air Force, the Royal Canadian Air Force, provincial and private air operators, were extended generously for medical missions. Busy services of all types gave priority to medical traffic, without consideration of time or reward.

The closest co-operation has existed between the officers of Indian Health Services, in their role of family physician and public health nurse, and the Indian Affairs Branch of the Department of Citizenship and Immigration, administering persons of Indian status, and the Northern Administrations of the Department of Resources and Development, who look after the Eskimos. This fine relationship was particularly advantageous, for, while each had its special functions, the combined resources of the cooperating departments were thus focused upon the native peoples.

In the Northwest Territories, Indian Health Services have extended professional guidance to the Administration, and medical officers have provided attention where other services were not available.

Since the local practitioners and community hospitals were in most intimate contact with the large proportion of the Indian population, the weight of active treatment fell upon them. Without their patience, sympathy and generous co-operation, a successful program, such as that which has been carried on, would have been impossible.

WELFARE BRANCH

Services of the Welfare Branch, embracing the Family Allowances administration and the Old Age Pensions and National Physical Fitness Divisions, continued this year to apply, encourage and co-ordinate measures for ensuring social well-being.

Newfoundland signed an agreement applying to that province provisions relating to Old Age Pensions and Pensions for the Blind. An agreement extending similar benefits to its residents was signed with the Yukon Territory Administration.

Ontario joined the federal government and other provinces this year in the National Physical Fitness program.

Grants were again approved of \$50,000 to assist the seven Schools of Social Work in Canada. An eighth school was started in 1949 at St. Patrick's College, University of Ottawa, and an additional sum of \$2,500 was included in Supplementary Estimates to provide assistance to it.

Programs were arranged this year by the Welfare Branch for three United Nations Social Welfare Fellowship holders, one from Finland, one from the Philippines and one from Ecuador.

Welfare Expenditures

Family Allowances payments for the 12 months ended March 31, 1950, totalled \$297,911,784.

The federal contribution during the year to the cost of Old Age Pensions was \$89,652,203.32, while \$3,536,730.97 was paid to the provinces to apply towards Pensions for Blind Persons.

Under the National Physical Fitness Act, approximately \$154,297.85 was contributed by the federal government to the provinces taking advantage of this plan.

FAMILY ALLOWANCES

Nearly 615,000 more families received Family Allowances in March, 1950, than when this federal plan began in July, 1945.

The Family Allowances Act was passed in August, 1944, and went into effect in July, 1945, when first payments were made to 1,237,754 families on behalf of 2,956,844 children. Almost five years later, in March, 1950, payments were made to 1,852,269 families in respect to 4,202,263 children. It is to be noted that the latter figures include 50,694 Newfoundland families with 139,571 children. A year earlier, that is in the month of March, 1949, Family Allowance were paid to 1,729,150 Canadian families. The increase in the number of families from March, 1949, to March, 1950, was 137,844. However, to get a true comparison it is necessary to subtract the Newfoundland families from this total. It will then be seen that the increase in the number of families in pay for Family Allowances, in the rest of Canada, was 87,150 families in the year ending March 31st, 1950.

This sizeable increase is accounted for in part by a continued high post-war birth rate, but more through the reduction in the waiting period for new families coming into Canada to one year. Previously, children coming into Canada had to wait three years before becoming eligible for Family Allowances.

Year's Highlights

Principal features of the fiscal year ended March 31, 1950, with respect to Family Allowances may be summarized as follows:

(a) *The Payment of Family Allowances in the Province of Newfoundland:*

Newfoundland children became eligible for Family Allowances in April, 1949, and first payments were made in that month to more than 40,000 families. During the fiscal year the total amount of Family Allowances paid in Newfoundland amounted to \$9,752,377. Registration prior to payment of Family Allowances in April, 1949, had been remarkable effective. The accounts were approved rapidly and most eligible families began to receive their payments from April, 1949.

Indications from Newfoundland throughout the year were to the effect that Family Allowances have been of decided importance socially and economically. School attendance has been stimulated quite remarkably. Purchases of children's clothing and shoes have greatly increased. An assured amount of cash income has been going to many homes where money had been scarce and uncertain. Many letters from Newfoundland parents show the improvement due to Family Allowances and reports from social welfare officers and others are to the same effect.

It is believed that the importance of Family Allowances in Newfoundland warrants the inclusion in this report of quotations from a parent's letter in that province:

Upon receipt of the first Family Allowance cheque one year ago I decided to keep a record of all purchases.

Previously, I could not clothe and feed my children "of which there are ten" and pay for their education. My oldest son had reached the age of eighteen years and did not complete the third grade. Each of the next four children of school age are similarly behind because of their lack of clothing and not being able to attend school.

In accordance with my plan of keeping a record of my Family Allowance expenditures, I am making a list of purchases by items with the total cost to show you how this money has been spent. My wife and I sincerely thank you.

Here is the list of purchases made with Family Allowance cheques for one year, for nine children ranging in age from two to sixteen years:

Boots, shoes, gaytees...	\$114 33	Boys' jumpers, wind-	
Stockings, socks	29 70	breakers	\$ 61 00
Skirts	51 05	Boys' rubber raincoats..	27 50
Sweaters	26 03	Tots' raincoats	5 58
Pants and Breeches	63 21	Tots' dresses	9 90
Overalls	11 70	Handkerchiefs	3 56
Tots' wollen suits	9 58	Gloves and mitts	11 55
Blankets	16 75	School bags.....	14 23
Caps and tams	9 67	Fountain pens	2 36
Underwear, bloomers ..	42 76	Mechanical pencils	2 45
Boys' slack suits	27 25	Snow suits	26 50
Tots' slips and skirts...	14 32	Boys' Parkas	37 50
	<hr/>	1 cart for invalid child..	12 75
	416 35	Mattresses	40 00
			<hr/>
			254 88

Total\$671 23

In addition to the above there is an unlisted amount for pencils, scribblers, pens, ink, erasers, exercise books, school books, fresh fruits and milk.

Once again, we say a sincere thanks.

A Newfoundland Parent.

(b) Two Changes Made in the Year in Family Allowances Legislation:

There were during the year two important changes in Family Allowances legislation: (1) an elimination of the provision in the Family Allowances Act by which deductions in the rates payable to children beyond the fourth in any family had been required, and (2) a reduction in the waiting period from three years to one year for children in families newly entering Canada.

It had been urged for some time that it was unfair to families having more than four children under sixteen that the additional children should be subject to deductions in Family Allowances payments as provided for by the Family Allowances Act of 1944. This view was accepted by Parliament with a consequent amendment to the Act effective April, 1949. Some 160,187 families involving 333,626 children were affected. The extra amount required throughout Canada came to \$543,731 monthly. An additional sum of more than \$6,500,000 annually had to be provided for Family Allowances when this change became effective.

In regard to the reduction in the waiting period for Family Allowances for newcomers to Canada, a sizeable administrative problem was involved in reaching these families to advise them of their new rights. Many had applied for Family Allowances previously while they were still ineligible, not having been in Canada three years, and others knowing of their ineligibility, had not endeavoured to register. In consequence, to reach all these families various means had to be used including direct correspondence and newspaper and radio advertising. It is believed that almost all were reached within a

relatively short period. The result of the earlier payments has been to make the lot of new families in Canada somewhat easier during a period when their resources are limited and when their family needs are likely to be considerable.

(c) *An Emphasis on increased Public Information Regarding Family Allowances*

It had been found that considerable numbers of families had lost one or more months' Family Allowances by failure to register newborn children for Family Allowances within thirty days of birth. These losses to parents ran in total to many thousands of dollars each month. It was felt incumbent upon the Family Allowances administration to bring home to parents the need for prompt registration for Family Allowances, and various means were used to this end, including notices with cheques, posters in public places, a notice on the registration form itself and in other ways.

A booklet *You and Your Family*, which had been in preparation for some time, was completed and application cards for it were inserted with Family Allowances cheques. Parents were invited to apply for the free booklet. Not all provinces had been covered by the end of the fiscal year but more than 400,000 requests had been received of which the majority had been met. The booklet gives a rather complete résumé of the principal facts concerning Family Allowances, indicating as well suggestions for their use. Moreover, it contains valuable information on family budgets and on many aspects of family and child health. Its reception has been excellent and a lively demand for it continues.

In order further to acquaint families with facts regarding Family Allowances and in particular with the responsibilities of families regarding notification on factors affecting eligibility, such as improper absence from school or juvenile employment, inserts with the cheques have been used. Direct advertising by newspapers and radio was used in Newfoundland and also in Canada generally when changes in legislation, already referred to, gave additional rights to families in regard to allowances. Posters have been prepared for use in Post Offices on such subjects as change of address, and in hospitals throughout Canada on the matter of prompt registration of newborn children for Family Allowances.

It is felt that the proper administration of Family Allowances demands continuous efforts so that Canadian families may know both their rights and their obligations in respect to this legislation. With tens of thousands of new families being formed each year with no previous knowledge of the wide publicity given to Family Allowances in 1945, it is essential that every effort be made to bring home to these families, as well as to those who have been in pay, important aspects regarding Family Allowances.

(d) *Relations with Child-Caring Agencies; Balances Held in Trust Accounts:*

During the fiscal year a general directive on the matter of the management of Family Allowance accounts by child-caring agencies throughout Canada was prepared and issued. This directive resulted from changes in the Regulations giving authority to prescribe terms and conditions under which child-caring agencies should receive, use, and account for Family Allowance payments. Considerable groundwork was done with child-caring agencies prior to the issue of the directive and a great deal of effort was given subsequently to its application. The result has been general acceptance and implementation by the child-caring agencies of the requirements of the directive.

Payments were being made to child-caring agencies in respect to 14,636 accounts in Canada by the end of the fiscal year. The principal aim of the directive is to secure desirable uniformity among the child-caring agencies regarding the use of Family Allowance funds.

One of the principal areas of administrative interest in the past year has been to survey the balances held in trust accounts by child placing agencies on behalf of children for whom payments of Family Allowances are made to agencies. While the number of accounts is 14,636, some 30,687 children are concerned. The various agencies have been given direction as to the types of expenditure they may make from Family Allowances accounts on behalf of these children. They are permitted, for instance, if they so desire, to pay an amount up to \$4 per month as a supplement to their ordinary board rate. Other expenditures permitted and encouraged have to do with immediate needs of children beyond those needs ordinarily met from child welfare agencies resources. Some times this means extra clothing, dental or optical care beyond the ordinary, provision of educational or recreational facilities, pocket money or provision by accumulation for future needs in cases where wise planning for the individual child would seem to point toward provision for future needs.

The amounts of balances held in trust accounts by child welfare agencies in each of the provinces at the end of each of the last four calendar years are shown in Table 18, page 131. In general it will be seen that there has been a decided increase in the expenditures made in each year in relation to receipts. By far the largest balance, that of \$749,726.20, is held in Ontario. This, however, is held on behalf of 14,084 children, almost half of all those children in Canada who receive the benefits of Family Allowances through child welfare agencies accounts. Moreover, the percentage of expenditures against receipts, at the end of 1949, in Ontario, exceeds 91 per cent and the per capita balance as of December 31st, 1949, was only \$53.23. An examination of the average balances per child is revealing. With an average monthly receipt of \$6 per child, balances do not exceed on an average more than 8 to 9 months' Family Allowances. This is not considered excessive.

The administration of Family Allowances is much encouraged by the manner in which child welfare agencies have come to manage these accounts and by the evidence of their judicious use of them as their experience with Family Allowances lengthens. The whole field of these trust balances in child welfare agencies is one that is felt to be of very considerable importance and close liaison is maintained by the Regional Family Allowances offices and the agencies in the respective provinces in order to bring to this subject the attention it merits.

In this general field, the agreements made between the Department of National Health and Welfare and the provincial Departments of Welfare, child-caring agencies, and in some instances municipalities, by which arrangements investigations are carried on in the child welfare field and reports submitted to the Regional Offices of Family Allowances, have been continued. More than 4,500 such reports were provided in 1949-50. One new agreement, that between the Department of National Health and Welfare and the Department of Welfare of the Government of Newfoundland has been made. This agreement should result in considerable stimulus to the welfare services in Newfoundland.

Examination of Tables

Attached to this report are a number of tables of Family Allowances statistics. (See pages 116 to 132.) Some points of interest in these tables are as follows:

(a) *Family Allowances Payments (Table 5)*

The increase in total payments between the two fiscal years amounts to more than \$26,000,000. This figure represents very much more than the annual increase to be expected in Canada due to normal factors such as population growth. Besides the increase in the year ending March 31, 1950, due to the

inclusion of Newfoundland (more than \$9,750,000), there were two other principal causes for the large increase. One was the change in legislation already referred to, eliminating the reduced rates of payment for children beyond the fourth in any family; this change added more than \$6,500,000 to the costs of Family Allowances in the last fiscal year. The other change in legislation reducing the waiting period for children newly arrived in Canada from three years to one year cost in the neighbourhood of \$1,500,000 in the last fiscal year. The total increase in payments, therefore, due to these three unusual factors was more than \$17,750,000. The increase that may be accounted for by normal causes is an amount somewhat in excess of \$8,000,000. This compares with an increase between the fiscal years ending March 31, 1948, and March 31, 1949, of approximately \$7,200,000.

(b) *Number of Families and Children in Pay for Family Allowances (Tables 6 and 8.)*

In March, 1950, the number of families in pay was 1,852,269 and the number of children 4,202,263. While Canadian birth rates tended in 1949 to level off or even to show a slight decrease from the high post-war rates, this tendency at the end of 1949 and in the early months of 1950 appeared to reverse and there has been a slight upswing in the latter months of the fiscal year. However, there will be no sudden increase in future in families and children in pay, compared with that caused by the amendment in the Family Allowances legislation reducing the waiting period for immigrant families from three years to one, and compared with the much more important addition in numbers due to Newfoundland's entry into Confederation.

(c) *Comparative Statement of Family Allowances Paid in March, 1950, and in March, 1949 (Table 10)*

Examination of the second part of this table shows that *families in pay*, increased by more than 7 per cent. The highest *percentage* increases, other than in the Northwest Territories and Yukon, were in the provinces of British Columbia, Alberta and Ontario. Increases in the *percentage of children in pay* were greatest in British Columbia, Ontario and Alberta, respectively. These increases, both in families in pay and children in pay, reflect to a considerable degree the increase in immigrant families eligible for Family Allowances due to the change in legislation already referred to, as well as the movements of families between provinces in Canada. The latter cause is the more important, as subsequent discussion of Table 11 will show.

The amendments to Family Allowances legislation may in some instances produce effects that appear contrary to one another. For example, while the increase in the number of *children in pay* for Family Allowances between March, 1949, and March, 1950, was 63,780 in Ontario compared with 48,364 in Quebec, yet the increase in *amount of Family Allowances paid* in Ontario was \$448,973 as compared with \$568,547 in Quebec. This is accounted for by the fact that the amendment to the legislation eliminating deductions in Family Allowance payments in families beyond four children affected more families in Quebec than in Ontario.

(d) *Transfers of Accounts Between Provinces (Table 11)*

Examination of this table will show that the following provinces had more families transferred in than out: Prince Edward Island, Quebec, Ontario, Alberta, and British Columbia. The greatest gains in such transfers were shown in Ontario, Alberta, and British Columbia. It will be observed that while Ontario gained as many as 1,043 families on transfer, Quebec gained by 16, Alberta gained 1,074 and British Columbia nearly 800. On the other hand

provinces showing net losses on movements of families include Newfoundland, Nova Scotia, New Brunswick, Manitoba and Saskatchewan. The most marked losses are shown in Saskatchewan, 1,781; New Brunswick, 552; and Nova Scotia 425. These movements in families are of considerable importance in assessing the economic and social currents prevailing in Canada. They are very useful in forecasting housing needs and other requirements inherent in sizeable population shifts.

(e) *Birth Verification (Table 13)*

It will be seen that out of several million births that have had to be verified since the inception of Family Allowances, the balance remaining March 31st, 1950, was 156,821. The balance on March 31, 1949, was 144,000. The increase is accounted for by the fact that during the year Newfoundland children came into pay to the number of 139,571. Of these Newfoundland children there are 30,528 whose births remain to be verified at the end of the fiscal year. Subtracting this number from the total balance unverified at the end of the fiscal year there is a balance of 126,293 births unverified in the remaining Canadian provinces. This figure, 126,293, is the one comparable to last year's 144,662. Since birth indexes become available usually four to six months after births occur, there will be at any time in the neighbourhood of 100,000 births awaiting verification. It will be seen, therefore, that the backlog of births remaining to be verified has been practically eliminated. In Newfoundland about one-fourth of the births remain to be verified. Progress during the past year has been rapid, however, remembering that Family Allowances in Newfoundland are just one year old.

In Quebec, while 88,000 births remain to be verified, progress has been steady as will be seen by comparing the figures at the end of the fiscal years 1948, 1949 and 1950, respectively. That 88,000 still remain in Quebec is due to the delay in availability of birth records for verification purposes in that province during 1945 and 1946. Quebec is steadily reaching the position of other provinces, so that during 1950-51 it is expected that the point will be reached there where current births only will await verification. Actually while 88,000 are shown as a balance unverified, a large proportion of these have been checked as correct by the Family Allowances administration, and only await acceptance into provincial records before they become technically "verified".

Other Features

During the fiscal year relatively few changes in senior personnel occurred in the administration of Family Allowances. Mr. J. K. Balcombe, the Welfare Supervisor for the British Columbia Regional Office resigned after having given invaluable services to this Department. One employee, the Supervisor of Welfare Services for the Nova Scotia Regional Office, Mr. G. P. Allen, was on leave of absence without pay, while doing postgraduate studies in the social welfare field at McGill School of Social Work.

While Social Welfare Supervisors in each of the Regional Offices had been provided earlier, it had not been possible to secure persons with suitable professional and other qualifications for appointment as assistants. During 1949-50 qualified persons were secured and appointments were made to the offices in Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland. At March 31, 1950, 23 persons were employed in the social welfare field either as Welfare Supervisors or assistants in the various Regional Offices.

The work of the Welfare Supervisors and their assistants, just referred to, is important. One indication of their activity will be seen in the fact that

during the fiscal year they conducted 4,571 welfare investigations. These involved, for example, determination as to the proper parties to receive Family Allowances or investigation of charges to the effect that certain families were not using Family Allowances for the intended purposes. Experience has shown that a high proportion of such charges were not substantiated. This was already pointed out with detailed statistics in the annual report for the Department for the year ending March 31, 1949. Nevertheless it is necessary that proper investigation be carried out and recommendations be made to the Regional Director in certain cases to change the payment to another person, or even to provide that the payment will be made through a child-caring agency or through an administrator.

In addition to the welfare investigations carried out directly by the social workers in Regional Offices, 4,500 more investigations were completed for Family Allowance regional offices either by provincial government welfare departments or by other agencies. Such investigations are performed on a paid basis at a rate of \$5 per completed case report.

Administration.—During the year the regular conference of Regional Directors of Family Allowances was held in Ottawa. Such annual conferences are held to discuss mutual problems in administration. Policy and procedures are thoroughly reviewed and the discussion makes for improvement in administration, and for uniformity in interpretation and application of policy.

Senior administrative officers in Family Allowances visited the various Regional Offices. In addition, the Director for the Northwest Territories and Yukon had the opportunity in the autumn of 1949 to make an extended trip to the Yukon where he met with numerous public officials and others interested in various aspects of Family Allowances in that area. It is believed that such visits help greatly in mutual understanding of Family Allowances as they affect areas such as the Yukon.

During the fiscal year the National Director of Family Allowances served on two separate occasions for the Department of External Affairs as alternate Canadian representative to the Social Commission of the United Nations. This type of experience is of considerable value in providing wider horizons of international character in the understanding and appreciation of welfare matters. Close association and exchange of experience with representatives of many other countries similarly engaged in various types of welfare administration is most useful.

During the year numerous persons interested in Family Allowances visited the office at Ottawa and some of the regional offices. Included were social welfare personnel, government officials, either from Ottawa or from provincial governments, and some from outside Canada. Among the latter was Mrs. Virginia de Guia, Vice-Mayor of Baguio City, Philippines.

Types of Reports.—The Regional Family Allowances offices made considerable effort during 1949-50 in improving the types of report received on employment of persons under sixteen years of age, which persons are ineligible for Family Allowances. The breadth of these reports and the speed with which they are received determines the size of overpayments arising from this cause. The Unemployment Insurance Commission had improved the very useful service they had previously given to Family Allowance regional offices in this field. Questionnaires addressed to parents of children in the ages likely to be affected by juvenile employment have also proved highly effective. In consequence, many overpayments have been limited or even prevented.

Continuing efforts have been made in the matter of school attendance. Provincial departments of Education have co-operated in supplying reports of



Family Allowances continued to assure adequate food and other necessities for the growing generation.

improper absence of children, and the methods by which these reports have been made to Family Allowances regional offices have been improved in a number of provinces. Here, too, the result has been to lessen appreciably improper absenteeism and to prevent sizeable overpayments from occurring. In Newfoundland particularly the effect of Family Allowances upon school attendance has been noteworthy. There is still opportunity in some provinces, however, to get more complete reports on improper absences from school, and particularly to speed these reports so that prompt action can be taken. Undoubtedly, Family Allowances can provide a most effective means to ensure good school attendance. The administration of Family Allowances is completely dependent on provincial action in this regard, since school attendance, like education generally, is a matter of provincial jurisdiction.

Overpayments

The subject of overpayments is considered of sufficient importance to treat somewhat extensively. As of March 31, 1950, overpayments outstanding amounted to \$451,174.78. This covers the entire period, July 1, 1945, to March 31, 1950. It should be observed that the recovery of overpayments necessarily shows some time lag after the setting up of such overpayments. Therefore recoveries in any one fiscal year are not wholly identified with the overpayments set up in that year. In other words, a certain proportion of recoveries relate to overpayments set up in earlier years. For example, in the fiscal year ended March 31, 1950, the total overpayments discovered and set up amounted to \$611,335.06 (these overpayments while determined in the last fiscal year may have occurred during any one of the fiscal years since Family Allowances began). Collections (in the year ended March 31, 1950) amounted to \$579,555.23.

An analysis of the reasons for overpayments would seem in order. A table attached (Table 17) gives a breakdown of the overpayments set up in 1949-50, classified under ten headings and showing the number of accounts affected and the amount of money involved in each classification. Further, percentages are given to indicate the relative importance of each one of the causes for overpayments. It will be observed that in frequency the three chief causes for overpayments have been (a) *working for wages*, (b) *improper absence from school*, and (c) *non-maintenance by the parent*. In amounts of money involved the three most important classes are (a) *non-maintenance*, (b) *working for wages*, and (c) *birth date errors*. (This cause of overpayments has been almost completely eliminated so far as current births, and births during the last three years, are concerned, as this report shows later.) Non-school attendance here is fourth in importance.

The right to Family Allowances depends upon the child's continuing eligibility. Unless the Family Allowances administration knows of the ineligibility immediately, the child will continue in pay and there is an overpayment in consequence. The problem becomes one of getting the earliest possible notification of ineligibility from parents, employers, school officials, welfare agencies, or any others in a position to know of such ineligibility. If ineligibility can be anticipated, so much the better, because proper advance action can then be taken to avoid an overpayment.

Removal from Canada, working for wages, and even non-maintenance by the parent, could in some cases be anticipated. School absenteeism is more difficult and certainly such an event as the death of the child could not be anticipated. Efforts must be continually made to secure from parents (whose immediate responsibility is involved) and others concerned, the speediest possible notice of ineligibility already in being, and whenever possible in advance. Continual provision of information to parents regarding their

responsibilities in this matter is the prime requirement. That parents generally have a good understanding of the factors causing ineligibility of children and that they do co-operate in giving early notification is seen from the fact that accounts subject to overpayment in 1949-50 constituted less than 1 per cent of all the Family Allowances accounts in pay. Or, put in terms of money paid, overpayments set up in the fiscal year, \$611,000, amount to about $\frac{1}{5}$ of 1 per cent of Family Allowances paid in the year.

Most Recoverable

It should also be pointed out that of the amount outstanding in overpayments at the end of March, 1950, more than 90 per cent is recoverable; 35 per cent, that is \$156,983.29, is *recoverable* automatically from active Family Allowances accounts; it is anticipated that 55.5 per cent, or \$250,326.16 more, is in large part *recoverable* from parents, even though their Family Allowances accounts have terminated. It is felt that the remainder, that is 9.5 per cent of the total, or \$42,863.33, should be considered *uncollectable*.

An analysis of the \$42,863.33 considered uncollectable at the end of the fiscal year will be of value. This balance is made up of an accumulation of amounts which may have been paid in any one of the fiscal years since July 1, 1945, when Family Allowances started. It is found that 68.4 per cent of the total consists of payments made in the fiscal years 1945-46 (Family Allowances were paid in the last nine months only of that fiscal year), and in 1946-47. The balance, that is 31.6 per cent of the overpayments now considered uncollectable, consists of payments in the last three full fiscal years with the amount for 1949-50 being only \$335. It is apparent, therefore, that the principal causes for overpayments now considered uncollectable were factors more prevalent in the earlier years of Family Allowance payments and much less prevalent in the later years.

One of the principal causes of earlier overpayments was the unavailability of provincial birth records for birth verification requirements in the first years of Family Allowances. With the present system of ready availability of birth records, almost no overpayments occur now through birth date errors. Another factor, and probably the principal one for the greater number of overpayments arising during earlier years and which overpayments are now considered uncollectable, was the lack of knowledge on the part of parents regarding their rights and responsibilities in respect to Family Allowances. For example, a sizeable amount of overpayments arose through duplicate payments. Parents who had been separated some times applied (in two registrations) for the same children. Duplicate accounts in some cases were created and overpayments resulted. That sort of overpayment can scarcely arise today.

Factors Involved

Certain factors will cause the total overpayment balance to lessen. Among these it is indicated that there will be less absenteeism from school and a more rapid notification regarding absenteeism; a greater knowledge that children who work for wages cannot be paid Family Allowances and a more rapid method of getting information to Family Allowances offices when children under sixteen do engage in employment; quicker notice of non-maintenance and other causes of ineligibility such as the death of a child or its departure from Canada. All these factors which will lessen the total of overpayments are dependent ultimately on the broadest possible public information, with resulting prompt action by parents in giving notification regarding changes in eligibility of their children.

On the other hand, certain factors will tend to cause the total of overpayments to increase, at least for some time and in certain areas. For example, the arrangements made to date for notification on school absenteeism and

employment of juveniles is not as thorough and effective in some provinces as it will become. As its effectiveness increases the first tendency is to drive up overpayments. As these overpayments are created and recovery action is taken so that the parents become more aware of the causes of overpayments, then at a later stage the frequency with which such overpayments are created will decrease.

Overpayments in Quebec

The Auditor General in his report for the fiscal year ended March 31, 1949, made a number of observations regarding Family Allowances. He pointed out that of the balance of Family Allowances overpayments on March 31st, 1949, three-quarters applied to payments made in Quebec. It should be recalled that this balance of overpayments to which the Auditor General refers consists largely of payments made in the earliest years of the operation of the Family Allowances Act. The large proportion of Family Allowances overpayments in Quebec is of course mainly due to the delay in obtaining provincial birth records in that province. This difficulty has now been overcome. As birth verification in Quebec has approached its final stages, and as it has become possible to check every claimed birth date back to the earliest applications made in 1945, errors that could not have been discovered earlier have been found. Often-times overpayments, some fairly sizeable in amount, have had to be set up. This difficult and painstaking task of final checking of a relatively small balance of Quebec birth dates still not finally proven, is now almost complete.

Another reason obtains, however, for the high proportion of overpayments in Quebec in relation to the other provinces. This is the matter of juvenile employment. Its effects will be seen even after the last results of delayed birth verification have passed. Juvenile employment in Quebec, related as it is to the early school leaving age (14 years), causes a very large proportion of the overpayments. Many juveniles between fourteen and sixteen years of age, who in other provinces would still be at school under compulsory school legislation, are in Quebec employed in industry. Until the fact of such employment is known to the Family Allowances office, overpayments occur. This factor helps to keep the proportion of overpayments in Quebec high in comparison with other provinces.

The Auditor General also observed that overpayments occur as a rule, either because proof of birth is not established or because children are not maintained by the applicant. Ten principal causes of overpayments are set out in Table 13 already referred to. In the frequency with which they occur it will be seen that birth date errors rank only fourth in importance, and lack of maintenance third. Two more frequent causes of overpayments are working for wages and improper absence from school. Birth date errors and non-maintenance do, however, constitute 38.7 per cent of the amount of the overpayments set up in the last fiscal year, and 38.4 per cent of the number of accounts affected by overpayments.

Suggested Measures

The Auditor General suggested that safeguards might be introduced. One safeguard suggested was that proof of the birth date accompany application. Such proof would consist of a copy of the birth registration certificate, of a baptismal record, or some other documentary evidence. It will be recalled that no such proof was required or suggested at the time of original registration for Family Allowances. To require such documentation would put the parents to considerable inconvenience and to some cost. Even more important it would inevitably delay payment in Family Allowances. These are sound arguments against such a suggested requirement.

The principal reason, however, for not changing now to a system by which proof of the claimed birth date would be required to accompany an application for Family Allowances is the fact that since two years or more overpayments arising through birth date errors are almost non-existent. In other words, to change to such a system would be to apply a drastic and burdensome remedy to a case where the ailment has already passed. While it is true that in 1949-50, 1,410 accounts involving overpayments of \$104,980 (most of which is recoverable), were effected by birth date errors, these accounts had all actually been put into pay in earlier fiscal years before the present verification method had been perfected. Verification now takes place so easily and so effectively that overpayments due to birth date errors almost never occur. Overpayments from birth date errors arising in connection with cases put into pay for the first time in the two fiscal years ending March 31, 1948, and March 31, 1949, amounted to a total of \$163, all of which was recovered. It is apparent that the problem of possible overpayments, due to birth date errors regarding children registered in the last three years has been met.

Annual Declarations

The other point made by the Auditor General was that in order to avoid overpayments due to non-maintenance by the applicant, parents should be required to furnish an annual declaration to the effect that the child is eligible, is being maintained by the parent, and if of school age, attending school. This would involve requiring almost 2,000,000 parents to make such a declaration each year. While the burden on any one family would not be onerous, the work resulting from the receipt of 2,000,000 extra forms in Family Allowances offices would be extremely heavy. Each such form would have to be scrutinized and only some months after the receipt of the forms would action be possible upon the last of them.

Aside from the cost involved in processing these forms there would be the very real possibility of misleading parents into relying upon such forms as their means of notification of ineligibility of their children. Presently they are required to notify the Family Allowances administration by letter when a child becomes ineligible. Such letters can be given immediate attention. If parents came to depend upon annual declarations to which immediate attention could not possibly be given, the result might be to increase overpayments rather than to limit them. This could easily make the remedy worse than the ailment.

The matter needs to be brought into clear focus. In 1949-50, out of 1,866,000 accounts in pay, only 13,723 accounts were affected by overpayments. In other words, more than 99 per cent of all Family Allowances accounts were clear of overpayments. To require an annual declaration from parents would mean a very great waste of time and work since so small a proportion of accounts are affected. Most would merely re-affirm their continued eligibility. Actually the need is to get notice of ineligibility when it occurs, or, if possible, before it is due to occur. Annual declarations at best could be useful only with respect to a very small minority of accounts and even the useful ones would advise regarding ineligibility only at the time of the declaration. The declaration would be out of date in many instances immediately it was received.

The kind of information needed from parents giving notice of current or impending ineligibility should not be submitted in annual declarations but by direct correspondence at the time of the occurrence. By and large it would appear that such notification is presently coming forward in the majority of instances and that the co-operation of parents is improving all the time. For instance, it is quite possible to cross-check loss of eligibility by comparing parents' advice with such other sources of information as school attendance

records, with employment reports, and with death lists. All these cross-checks show that notification from parents regarding ineligibility is improving steadily.

Rather than require an annual declaration, which would appear unnecessary to the vast majority of parents whose children continue at all times to be eligible for Family Allowances, which would be fairly costly, which would throw a great burden upon Family Allowances offices, and which would be of doubtful use in any case, it is believed better to direct publicity to parents so that they will continue their present co-operation and improve it in order to advise of ineligibility.

Prosecutions under the Family Allowances Act

The Family Allowances Act provides certain penalties for any person who obtains Family Allowances fraudulently. When it appears that an offence has been committed, arrangements are made to have the R.C.M.P. investigate. If their investigation shows evidence of fraud, the Department proceeds with prosecution under Section 14 of the Act.

(a) Number of Cases of Prosecutions

During the year ending March 31, 1950, prosecution was considered in 46 cases. In 16 of these action was still pending as of March 31, 1950. Three cases were abandoned or withdrawn for reasons such as the poor health of the defendant. One case was postponed sine die, the accused having been placed in a mental hospital. This leaves 26 cases which were completed during the year ending March 31, 1950.

It should be noted that the date of the offence out of which the prosecution arose does not correspond with the date of completed action since prosecution is undertaken some time after the actual offence has been committed.

The word "case" as used here, refers to an individual who was prosecuted. There were four instances in which two or more people were prosecuted because of offences arising out of one Family Allowances account. Thus, the 26 persons prosecuted had to do with offences arising out of 20 Family Allowances accounts.

(b) Reasons for Prosecution

An analysis of the reasons for prosecution in the completed cases indicates the following:

Non-maintenance	13 cases
Non-existent or deceased child	6 cases
Duplicate accounts	6 cases
Non-resident of Canada.....	1 case
<hr/>	
Total	26 cases

A word of explanation is in order with respect to each of the above classifications.

(i) *Non-maintenance*—One of the requirements of the Act and regulations is that a child must be maintained by a parent. If a parent applies for and accepts Family Allowances for a child whom he is not maintaining, prosecution may be undertaken.

(ii) *Non-existent or deceased child*—These are cases where parents apply for and receive allowances for a child who had never existed or who is deceased. The fraud in such an instance is obvious.

(iii) *Duplicate accounts*—It sometimes happens that a parent may apply more than once for the same child. With the present arrangements for checking the birth of a child a duplicate application is usually detected at once. However,

in the early stages of Family Allowances administration, before birth indexes were available, it was possible that payment might be made twice for the same child. A parent accepting duplicate payment of Family Allowances is subject to prosecution.

(iv) *Non-resident of Canada*.—When a child leaves Canada, allowances cease to be payable. There have been a few instances when parents left Canada but continued to have Family Allowances sent to a Canadian address and, furthermore, made arrangements to receive and cash the cheques. When this situation is discovered, prosecution follows.

(c) *Disposition of Completed Cases*

In 24 of the 26 completed prosecutions the defendant was found guilty. Two cases were dismissed. Two persons were given suspended sentence. The remaining 22 were required to pay a fine or serve a jail term. Fines ranged from \$1.00 to \$1,200.00 and jail terms ran from five days to six months. Twelve persons paid the fine, nine served a jail sentence, and the sentence has not yet been carried out for one person.

(d) *Conclusion*

There are certain conclusions which may be drawn from the experience over the past few years. First, it is significant to note the extremely small number of cases in which it is necessary to enter prosecutions for fraud when compared to the total of persons receiving Family Allowances.

Another observation is that with improved facilities for checking births and with the general public being better informed regarding Family Allowances legislation, the number of prosecutions for certain types of offences, such as for duplicate applications, should decrease. However, when a fraud under the Family Allowances Act is discovered, prosecution will follow.

Indians and Eskimos

The number of accounts payable on behalf of Indian families reached 18,697 at the end of the fiscal year. This compares with 18,204 a year previously.

One of the chief features of the administration of Indian accounts during the past year has been the increased number of families who have been paid directly by cheque as white families are. There are several methods by which Family Allowances are paid on behalf of Indians, according to the degree of responsibility that it is considered the parents exercise. The transfer of more and more Indian families to direct payment reflects a move in the right direction.

Another aspect of the administration of Indian accounts is related to the payment of Family Allowances in Newfoundland. In the Labrador portion of Newfoundland the payment of Family Allowances to Indians is difficult to manage because of their scattered settlements, and of their ways of life. At Northwest River, in Labrador, the services of the Hudson Bay Company have been enlisted in order to pay Indians their Family Allowances and in order to control their use of the allowances. In a somewhat similar fashion the Department of Natural Resources of Newfoundland has undertaken to look after the Family Allowances accounts of a sizeable group of Indian families on the more northerly coast of Labrador.

With respect to Eskimos, reports show 1,636 families in pay March 31, 1950, as compared with 1,604 at the end of the previous year. These Eskimo families are to be found in 14 districts in the Western Arctic and in 12 districts in the Eastern Arctic. The administration of the Northwest Territories

has carried out surveys with regard to Family Allowances and their effect upon Eskimo families. The Deputy Commissioner states that in general Family Allowances are being used in a satisfactory manner. He quotes a report from a District Registrar as follows: "I was much impressed by the healthy appearance of the Eskimo children, which possibly is the result of regular feeding and a balanced diet, now possible by having special foods available for purchase with the children's Family Allowances". Other District Registrars have similar comments. The Deputy Commissioner concludes: "Undoubtedly Family Allowances have been responsible for many changes in the economy of the Eskimo people and in their habits of living. I firmly believe that most of these changes are for the better and that it has proved of great benefit by introducing new and nutritious foods to these people."

The Deputy Commissioner's survey of the items purchased by Eskimos against their Family Allowances credits in each one of the registration districts indicates that clothing and food, particularly milk, are among the principal items of expenditure. The Eskimos are not free to purchase any item they please but must make the purchases from prescribed lists which are prepared, having in mind the basic needs of their children and particularly the purposes of the Family Allowances Act.

One of the sources of considerable concern with Eskimo Family Allowances accounts had been the rather rapid growth of the balance of credits held by the Administration of the Northwest Territories. During the earlier years of Family Allowances payments, while procedures were being developed and Eskimos were being taught how best to use Family Allowances, expenditures lagged behind payments. By March 31, 1948, there was a balance of \$507,581; by March 31, 1949, this balance was \$576,495. However, since that time the use of Family Allowances credits by Eskimos has caught up to the amount of Family Allowances being paid by the Department of National Health and Welfare to the Administration of the Northwest Territories. In consequence, by December 31, 1949, balances were \$570,767 and by March 31, 1950, had decreased to \$550,255. These balances, by the way, are those shown on the books of the Administration of the Northwest Territories at Ottawa. The actual balances held when all vouchers are received from the field will be decidedly smaller.

The Department of National Health and Welfare welcomes the co-operation shown by the Administration of the Northwest Territories in this whole field. The field administration is most difficult and the assessment of results is particularly valuable.

Costs of Family Allowances Administration

A survey of the costs of the administration of the Family Allowances Act for the fiscal year indicates that it amounts to a sum somewhat in excess of \$4,000,000. Costs to Treasury were \$2,207,851.86; costs to the Department of National Health and Welfare were \$1,833,387.29. Additional costs to the Department of Public Works were approximately \$200,000. From the experience of the past fiscal years it is indicated that the total costs amount to about 1.5 per cent of the total of Family Allowances paid. This percentage is considerably less than that found in the administration of Family Allowances legislation elsewhere.

Co-operation

The administration of Family Allowances owes a great deal to organizations, both public and private, which have co-operated with it in advancing the objectives of the Family Allowances Act. Government departments, in both federal and provincial fields, employers, welfare agencies, school author-

ities and many others have been most helpful. As has already been indicated in this report the degree of co-operation from parents is steadily growing and it is evident that the understanding of the legislation and of the responsibilities of parents, as well as the rights of children thereunder, are increasingly appreciated. The constant efforts made by the Chief Treasury Officer, the District Treasury Officers and their staffs, have greatly aided the administration of Family Allowances. They have borne their full share of the responsibilities entailed in this program.

OLD AGE PENSIONS

Marked increase in the number of persons in receipt of old age pensions, which trend began about the close of the last war, continued throughout the year, although no further changes were made in the requirements which applicants must fulfil following the amendments to the Old Age Pensions Act in 1947.

At March 31, 1950, there were 282,584 persons in receipt of old age pensions as compared with 251,865 at the close of the previous fiscal year. Part of the increase of more than 30,000 pensioners was due to the entry of the Yukon Territory into the scheme and to the union of Newfoundland with Canada early in 1949. At March 31, 1950, there were 10,296 old age pensioners in Newfoundland and 108 in the Yukon Territory. The balance of the increase was in the other provinces and in the Northwest Territories.

Federal Expenditure

The increase in federal expenditure was relatively much greater, due to amendments to the Act in 1949 which authorized the Government of Canada to pay 75 per centum of an amount of pension granted under the Act up to \$40 a month. Prior to these amendments, the federal contribution had been limited to 75 per centum of \$30 a month.

Increase in the maximum pension payable, along with the very substantial increase in the total number of pensioners, resulted in federal expenditure for old age pensions rising from \$64,232,210.92 for the fiscal year 1948-49 to \$89,652,203.32 for the fiscal year 1949-50. This represents by far the largest increase in federal expenditure, as between two fiscal years, since the inception of the Act in 1927.

Pensions for Blind Persons

There were no changes in the requirements which applicants for pensions for blind persons must fulfil subsequent to the amendments to the Old Age Pensions Act in 1947. Consequently there was no unusual increase in the numbers of blind persons being granted pensions. At March 31, 1950, there were 10,517 blind pensioners as compared with 9,567 at the close of the previous fiscal year. Included in the increase were 171 pensioners in Newfoundland and two in the Yukon Territory.

As in the case of old age pensions federal expenditure rose sharply due to the amendments to the Act in 1949. Federal expenditures for pensions for the blind for the fiscal year 1949-50 was \$3,536,730.97 as compared with an expenditure of \$2,532,074.11 for the fiscal year 1948-49.

Administration

Old age pensions and pensions for blind persons are non-contributory pensions paid subject to a means test. With the exception of persons residing in the Northwest Territories all applicants for pensions must apply to the

pension authorities appointed by the provincial governments or, in the Yukon Territory, by the Government of the Yukon Territory. Federal supervision of the administration continued to be carried on by an audit of the provincial accounts and an examination of the decisions of the various pension authorities, the latter duty being performed in the provinces.

Parliamentary Committee on Old Age Security

On February 16, 1950, the Minister of National Health and Welfare gave notice of a motion to appoint a Joint Committee of the Senate and the House of Commons on Old Age Security. The Motion was debated in the House on March 10 and March 24 and agreed to on March 30. It was debated in the Senate on March 31 and agreed to the same date. The Committee had not commenced its hearings before close of the fiscal year.

Under the terms of the motion the Committee was to examine and study: the operation and effects of existing legislation of the parliament of Canada and of the several provincial legislatures with respect to old age security; similar legislation in other countries; possible alternative measures of old age security for Canada, with or without a means test for beneficiaries, including plans based on contributory insurance principles; the probable cost thereof and possible methods of providing therefor, and the constitutional and financial adjustments, if any, required for the effective operations of such plans, and other related matters.

Tables 26, 27, 28 and 29, pages 138 and 139, show the amounts paid by the Government of Canada to the Provinces for Old Age Pensions and Pensions for Blind Persons, for the fiscal year 1949-50, with relevant statistics as at March 31, 1950.

PHYSICAL FITNESS

Growing demand and enthusiasm all over Canada for more and wider programs of recreation and fitness was reflected in increasing activity of the Physical Fitness Division and of the National Council on Physical Fitness.

Shortages of trained leaders and lack of adequate facilities were still apparent and most of the provinces found it difficult to meet demands upon them, in these fields, with limited funds available. However, many useful projects were carried out and plans were made for further development of this phase of national well-being.

In 1949, the sum of \$7,000 was provided to Newfoundland, being added to \$225,000 provided under terms of the National Physical Fitness Act, 1943, which, divided among the co-operating provinces on a per capita basis, assists them in the promotion of fitness in all its aspects.

The Province of Ontario signed an agreement of participation with the federal government under terms of the Act, in April. British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick, Nova Scotia, Prince Edward Island and the Northwest Territories already were co-operating in the national fitness plan.

On appointment as National Director of Physical Fitness, in October, Mr. Ernest Lee, formerly Director of Physical Education and Recreation, Department of Education, British Columbia, became Chairman of the National Council on Physical Fitness.

Physical Fitness Division

While not operating an activity program as such, the Physical Fitness Division served as a clearing house to disseminate among the provinces the latest information on physical fitness, recreation, physical education, community centres, drama, sports and allied activities.

Close liaison in these fields was developed and maintained with other countries of the Commonwealth and with foreign countries, facilitating an exchange of publications and information on the latest developments.

In July and August the Assistant Director visited England, Scotland, the Scandinavian countries and France, and represented Canada at the Lingiad and the World Congress for Physical Culture in Stockholm, and at the International Congress for Physical Education for Girls and Women in Copenhagen.

Following his appointment, the Director visited the four Maritime provinces, where he found an ambitious building project, combining school and community centres, in evidence. The Director attended a workshop on post-graduate studies in Health, Physical Education and Recreation at Pere Marquette, Illinois. Standards were established, at that time, for universities offering post-graduate courses in these three fields.

The division was represented, also, at the following conferences: The Parks and Recreation Association of Canada; the British Empire Games Association; the Canadian Olympic Association; the Amateur Athletic Union of Canada; the Montreal Parks and Playgrounds Association; the Sportsman's Shows, in Montreal and in Toronto; the Canadian Camping Association; the Recreation Division of the Canadian Welfare Council; the Junior Drama Festival, in Saskatoon, and the American Association for Health, Physical Education and Recreation.

Information Materials

Information revelant to fitness, recreation, physical education, cultural activities, community centres, reports on new projects and research in Canada and other countries, new procedures and developments, etc., were issued in bulletin form to members of the National Council on Physical Fitness and to interested individuals and organizations.

More than 42,000 pieces of printed material were sent out, as well as a great volume of mimeographed bulletins. The division's publications, *Better Health through Skiing*, *Daily Does It*, *Guide for Leaders in Community Recreation*, and *National Aquatic Standards for Canada*, continued in great demand, and numerous applications were received for the *Fit for Tomorrow* supplement to the department magazine *Canada's Health and Welfare*.

Arrangements were made for publication of *Information on the Use of the Wetzel Grid*, in both English and French, and the division produced and distributed more than 3,000 copies of *Here's How to Do it*, which was also in demand.

Subjects covered in the duplicated material issued included, *Aid to Club Treasurers*, *Better Stages in Community Centres and Schools*, *Equipment for Outdoor Play*, *Olympic Rules*, *Pre-School Play Areas*, *Proceedings of the Second Conference of Sports Governing Bodies*, *Putting on a Play*, *Report of the Amateur Status Committee*, *Report of the Constitution Committee*, *Selected Bibliography* and *Sports and Athletics in Other Countries*.

A special camping exhibit was erected at the Canadian Camping Association's annual conference at Ottawa and a new bilingual display, showing the inter-relationship of local, provincial and federal services and the affiliation of individuals and clubs and local associations, drew favourable comment at the Sportsman's Shows in Toronto and Montreal.

A filmstrip *Simplified Staging* was produced for the division by the National Film Board. A filmstrip is being produced on *Lighting*. The division previewed 80 films and purchased 24 films and 35 filmstrips for its pre-view film library. This material is detailed in the catalogue *Here's How to Do It*, which was widely distributed both in Canada and abroad.

National Council on Physical Fitness

The National Council on Physical Fitness, appointed to act as an advisory body to the Minister to promote the physical fitness of the people of Canada, was most active.

Meetings were held in Toronto, in April, and in Ottawa in October. The April meeting was scheduled in such a way as to share part of its program with the Dominion Drama Festival. Special sessions were held on Children's Theatre programs and the place of drama in recreation.

Following the pattern established last year, a second meeting was held under auspices of the Council of representatives of all National Sports Governing bodies, when reports were presented on the constitution, amateur status, participation of school students in outside sports, railway rates, etc. Committees were set up at this conference to study the question of imported equipment and customs duties, and to consider recommendation to the government of an inquiry, possibly in the form of a Royal Commission, into sports, athletics and games in Canada.

In an attempt to solve the problem of shortages of trained leaders for small towns and rural areas, a committee was set up to study the question of regional leader-training schools. A proposed one-year recreation diploma course was recommended.

On the recommendation of the National Council, scholarships for post-graduate studies in the field of Physical Fitness and Recreation were awarded this year to Mr. M. L. Van Vliet, University of Alberta; Mr. H. D. Whittle, University of British Columbia; Mr. Roger Dion, University of Ottawa; Miss Louise Dumais, Laval University, and Mr. F. R. Kennedy, University of Manitoba. They will be obliged to go abroad since no such courses are available in Canada. The Council also recommended similar scholarship awards next year.

In co-operation with the Canadian Association of Mayors and Municipalities and the Parks and Recreation Association, the National Council began a recreation survey on a national scale, and dealing with the administration of recreation, finances, programs, capital expenditures, etc. Questionnaires were sent out to all cities of 100,000 or more residents, to a selected group of smaller cities and towns and to representative rural areas.

During the year the Council received briefs from the following organizations: the Parks and Recreation Association; Canadian Amateur Ski Association; Canadian Arts Council; Canadian Youth Hostels Association; Pan American Congress; Federation of International Gymnastic Ling, and the Sports College of the Air.

The Council recommended to the Minister of National Health and Welfare that funds be provided under the Mental Health and Professional Training Grants in the National Health Program for the training of recreational therapists, the payment of salaries to such persons and for the provision of needed recreation equipment to carry out their programs.

The amount of assistance provided to provinces, and provincial expenditures, under the National Physical Fitness Act, during 1949-50, are shown in Table 30, page 140.

ADMINISTRATION BRANCH

ADMINISTRATIVE SERVICES

Development of the department's activities in many fields made increasing demands upon administrative divisions servicing establishments abroad as well as at Ottawa and other Canadian points where federal health and welfare agencies functioned.

The **Departmental Secretary's Division** maintained liaison between the department and the legislative branches of government, while serving all divisions through its Accounts and Estimates, Correspondence, Central Registry and Duplicating Sections and the Departmental Stenographic and Typing Pool.

Work of the **Legal Division** was a reflection of problems arising from the fulfilment of the department's statutory obligations and from their interpretation through Regulations and procedures covering all phases of health and welfare.

Accommodation, staff and equipment requirements of expanding services kept the **Personnel, Purchasing and Supply Divisions** busy during the year.

The **Departmental Library** provided valuable reference information, through its collections of books, serial publications, pamphlets and government documents, at the main library and at branches in the Food and Drug Divisions and the Laboratory of Hygiene.

Staff of the Department, at March 31, 1950, totalled 2,789, of whom 773 were permanent.

INFORMATION SERVICES

With growing public interest in its work and generous co-operation from other government and voluntary agencies, the Information Services Division expanded its activities and coverage during the year and employed every means of providing Canadians with sound health and welfare knowledge.

Audio-visual media were more widely used than previously, the division producing films, filmstrips, displays and radio programs to show Canadians how to help in raising national health and welfare standards.

Major projects included participation with United States authorities and the National Film Board of Canada in producing a film on cancer, preparation of radio plays, public relations work concerning celebration of the 75th anniversary of Canada's first food and drug laws and presentation of displays at exhibitions.

Thousands of copies of books and folders were reprinted, new publications and posters were produced, departmental periodicals were improved and services were extended through the press, the radio, the forum, educational and other public bodies and societies to meet increasing demand for health and welfare information.

Press

Newspaper readers in Canada as well as abroad were kept advised on departmental activities and plans through the release of announcements concerning health and welfare measures and special stories prepared on request.

Developments arising from allotment of funds under the National Health Program accounted for the great majority of press releases but increasing use was made of feature space in the press and numbers of picture stories were arranged.

Members of the Parliamentary Press Gallery and of the news services were provided with factual reports and given facilities for spot news coverage.

The features *Here's Health*, a weekly mat service of cartoons and verse, *Canada's Health*, proofed columns of notes and *Press Fillers*, sets of briefs, continued to be popular with editors, additional house organs, magazines and even daily newspapers asking for these services.

Radio

Launched last year, a series of radio plays entitled *Here's Health* made remarkable progress, being heard regularly over 102 stations—the majority of Canada's independent radio outlets. These bright health stories were produced by professional radio groups in Montreal and Toronto and supplied to stations on discs. Subjects of 48 such plays produced this year ranged from the saga of a northland nurse to the work of a food and drug scientist.

National Health Notes supplied to all radio stations since 1938 continued to be used widely. The division also co-operated with such radio programs as the C.B.C.'s *International Network*, *Science Reporter*, *This Week*, *Radio Farm Forum* and *Monday Magazine*.

Possibilities of television, when available as an informational medium, were studied.

Periodicals

Health and welfare articles which aroused interest were published in *Canada's Health and Welfare*, provided monthly to more than 80,000 readers. Coloured bi-monthly magazine supplements were issued dealing with *Pure Food-Safe Drugs*, *Nursing*, *Community Chests*, *Dental Health*, *Mothers' Allowances* and *Indian and Eskimo Health*.

The division continued to edit the monthly *Industrial Health Bulletin*, and, also for the Industrial Health Division, produced two editions of the *Industrial Health Review*. Editorial assistance was given to the Nutrition Division on the monthly *Canadian Nutrition Notes* and the annual *Nutrition Bulletin* of the Canadian Council of Nutrition, as well as to the Food and Drug Divisions in issuing the bi-monthly *Food and Drug News*.

A mimeographed weekly news-letter *For Your Information* kept the health education field advised on projects and served as a clearing-house of news and views.

Publications

A colourful book *You and Your Family* was produced for distribution, on request, to recipients of Family Allowances.

To mark the 75th anniversary of the first Canadian food and drug laws, the division published *Canada Pioneers in Food and Drug Control* and an extended history of the Food and Drug Divisions.

Produced in collaboration with the Mental Health Division, *The Backward Child*, dealing with home care and training of the mentally-retarded child, proved very popular. The Child Training series for the same division was enlarged, new folders being published on *Stuttering* and *Shyness*. Also for the Mental Health Division a new series was begun on *The School-Age Child*, the first to be *Preparing the Child for School*.

First of the series on child upbringing *Up The Years From One to Six* was near completion. This book follows the very successful *Canadian Mother and Child*, the Child and Maternal Health Division's book on prenatal and postnatal care and maternity.

Other publications initiated, revised or reprinted are detailed in reports of divisions concerned. Arrangements were made to print calendars for a sickness survey by federal and provincial authorities. A new series of Indian Health calendars was prepared. The division again edited the department's Annual Report. For the Canadian Nurses Association the division published *What You Want to Know about Nursing*, and a Study Guide kit was prepared for the Canadian Association of Home and School.

Departmental publications are listed and described in *Words to the Wise*, catalogue of health education material, obtainable on request from the Information Services Division.

Films and Filmstrips

Biggest film project of the year was *Challenge: Science Against Cancer*. With costs borne jointly by this department, the National Cancer Institute of the United States Public Health Service and the National Film Board of Canada, this film evoked plaudits of critics at its world premiere in New York and Canadian premiere in Ottawa.

While production was by the Canadian government film agency, technical advice was drawn from government and non-government sources on both sides of the border, among them the Medical Film Institute of the Association of American Medical Colleges and the National Cancer Institute of Canada. This marked the first occasion when a project of this nature was sponsored jointly by Canadian and U. S. governments. Plans were made for world-wide theatrical release of the film and for a filmstrip for use in schools and colleges.

Two films sponsored by the department and produced by the National Film Board were winners in the Canadian Film Awards. They were *The Feeling of Hostility* and *Drug Addict*.

Three additional films produced for the department provided a total of 32 pictures covering a wide range of subjects.

Departmental films seen in Canadian theatres included *White Fortress*, dealing with the National Health Program, and *What's Under the Label?* The latter dealt with food and drug control. *The Unadulterated Truth*, a longer non-theatrical version of *What's Under the Label?* was made for special audiences. Theatrical news-clips produced included endorsements of *Immunization* and *National Health Week*.

Production continued on the second film in the *Ages and Stages* series, *The Terrible Twos and the Trusting Threes*. A fourth film in the *Mental Mechanisms* series, tentatively titled *The Feeling of Guilt*, was initiated for the Mental Health Division.

The film *Teeth are to Keep* was completed. Filmstrips finished included *Brush Up on Your Teeth*, *Ten Little People and Their Teeth*, *Your Health and the Corner Store*, *Pure Food-Safe Drugs* and the *Wetzel Grid*, for the teaching profession. Another strip was being made on the *Wetzel Grid* for the medical profession and filmstrips in production, in addition to that on *Cancer*, included four on restaurant sanitation entitled *Meals for Millions*, as well as *The Case History of Emily* and *A Good Breakfast* (Nutrition) *Teen-Age Teeth* and *A Toothsome Tale* (Dental) and *Simplified Staging* (Recreation).

To handle expanding work in these fields a film and filmstrip liaison officer was loaned to the division from the National Film Board.

The department's screen productions are described in the catalogue *Let's See*, obtainable on request from Information Services Division.

Exhibits

At the Canadian National Exhibition, Toronto, in August, a 35-foot exhibit dealt with Canada's health and welfare services, particularly with the National

Health Program, health education and food and drug control. An estimated 500,000 people saw this display, which was staffed by information officers and scientists from the Ottawa and Toronto food and drug laboratories.

The department also exhibited at the Canadian Federation of Home and School, Vancouver, in May; the Canadian Welfare Council's Montreal convention, the National Conference on Social Work at Cleveland, Ohio, and the Canadian Dental Association in Saskatoon, all in June; the Central Canada Exhibition, Ottawa, and the Maritime Dental Association meeting, St. Andrew's N.B., in August; the Ontario Community Welfare Council meeting, Toronto, in September; annual conventions of the American Public Health Association, New York, American Hospital Association, Cleveland, Canadian Institute of Sanitary Inspectors, Ottawa, and the Eastern Ontario Dental Association, Peterborough, all in October, at a health festival held by the Junior Chamber of Commerce at Sherbrooke, Que., and Dental Health Day, Ottawa, in February; the Montreal Sportsman's Show and the Canadian National Sportsman's Show, Toronto, both in March.

Posters

Three new posters dealing with *Flies*, protection of *Drinking Water* and *Common Drinking Cups* were produced for the Public Health Engineering Division.

Posters employing humorous cartoon technique were produced on *General Health*, *Balanced Diet*, *Recreation*, *Clean Plant*, *Skin Care* and *How are You?* for the Industrial Health Division. A poster on *Moving* was produced for information of Family Allowances recipients.

Biological Photography

Value of the Biological Photographic Laboratory in the establishment of the division was demonstrated frequently when pictures were required on scientific subjects. Important photographic records not obtainable elsewhere were thus secured for professional and informational use.

Work of the biological photographers won international recognition, one print being selected by the Professional Photographers' Association of America for its permanent loan collection.

Distribution

With the great turnover of departmental literature larger quarters were obtained for the Distribution Section. More than 2,500,000 pieces of informational material were shipped to provincial, municipal and other agencies assisting in distributing it. Departmental periodicals sent by direct request represented another 2,500,000 pieces. Arrangements were made with the Department of Public Printing and Stationery to handle numerous applications from abroad for the department's literature.

Miscellaneous

Arrangements for public and press participation were made in connection with "open house" observances marking the 75th anniversary of the first Canadian food and drug legislation.

The division co-operated with the National Film Board and with United States authorities in staging elaborate premieres of the Cancer film in New York and Ottawa and public relations arrangements were made for first showings in provincial capitals and other cities.

Addresses and radio talks were given by members of the division and departmental officials were assisted in preparation of material for speeches.

radio broadcast and publication. The Director of Information Services lectured on Public Relations at Carleton College and Toronto University. For the second year, a public health class at Ottawa University was given lectures during the winter and the division co-operated with the Departmental Secretary and the Secretary of the Dominion Council of Health in visits to the department by nurses from McGill University, Montreal, and Carleton County, Ont., Health Unit.

Stamp meter slogans were arranged for use on envelopes carrying Family Allowances cheques.

Large numbers of people visited the division during the year in search of specific information and there was a large volume of correspondence (more than 100,000 letters) with enquiries from all over Canada and abroad.

RESEARCH DIVISION

During the year the Research Division carried out a number of major research and developmental projects in addition to the provision of routine research services for officials of the department, and for other government and voluntary agencies as well as for international bodies.

The division carried on a number of projects to assist the provincial health surveys being made under the federal Health Survey Grant. Comprehensive uniform reporting forms were drawn up to be used in the provincial health surveys to ensure that basic data on the health services, facilities and personnel in all provinces would be collected on a uniform basis. Research assistance was made available to the Newfoundland Public Health Department in carrying out some aspects of their health survey; in this connection the division prepared background data for the use of that department in its health survey report. Detailed information was supplied to a number of provinces concerning the number and location of physicians, for use in the health surveys, and a number of special projects were carried out to assist them in other aspects of survey work. Assistance was also given to the Health Insurance Studies Division in connection with other projects under the National Health Grant Program.

Parliamentary Committee

For several months the services of the division were placed at the disposal of the Joint Committee of the Senate and the House of Commons on Old Age Security. The Director of the division was appointed Research Adviser to the Committee and on a number of occasions testified before it. At the request of the Committee the division prepared comprehensive reports on old age income security programs in eight countries and in response to requests by the Committee during its hearings supplied a considerable amount of documentation on various aspects of old age security in Canada and abroad. Under the direction of the Committee the division prepared a draft summary of the evidence for the factual part of the Committee's report to Parliament.

Rehabilitation

In the course of the year the division initiated a program of research in the field of rehabilitation of the disabled, including the related subject of disability pensions, and a research assistant was assigned to this work on a full-time basis. Conferences were held in Washington with officials of the United States Office of Vocational Rehabilitation concerning the operation of the American federal-state rehabilitation program and the programs of the Woodrow Wilson Rehabilitation Centre in Virginia, and of the Institute for Crippled and Disabled and the Rehabilitation Department of Bellevue Hospital

in New York were studied. With the Chief of the Industrial Health Division the Director of the Research Division represented the department on the Interdepartmental Committee on Rehabilitation set up for the purpose of planning a National Conference on Rehabilitation of Disabled Persons. At the request of this Committee, the division was responsible for the preparation of a reference book discussing the rehabilitation process and containing background data on existing rehabilitation services in Canada, the United States and the United Kingdom. In the preparation of some of this material, assistance was received from Mrs. R. W. Summey, Rehabilitation Consultant for the Montreal Council of Social Agencies.

Other Services

During the year a number of comprehensive reports were prepared for the United Nations and its specialized agencies, dealing with different aspects of social welfare work in Canada and including detailed studies on child and youth welfare services, marriage and divorce, traffic in women and children, family assistance and youth guidance. Reporting of changes in federal and provincial health legislation for the World Health Organization was continued, and a number of reports, including monographs on Income Maintenance and on Medical Care in Canada, were prepared for the International Labour Organization.

The division assisted the Industrial Health Division in the conduct of industrial health surveys in Newfoundland and New Brunswick and technical assistance was also provided the Dental Health and Nutrition Divisions in surveys related to their work. The division provided a considerable amount of staff time in the preparation of forms to be used in the National Sickness Survey.

Sections of the Canada Year Book and of other official publications dealing with health, welfare and social security subjects were also prepared by the division, together with a number of articles for publication, including the "Global Report" contained in each monthly issue of the departmental publication, *Canada's Health and Welfare*, and the annual report, *Survey of Physicians in Canada*.

Bulletins

Publication of two series of bulletins dealing with different phases of health and welfare was also begun during the year. A number of bulletins were issued in the Social Security Series and these included: *Mothers' Allowances Legislation in Canada*, a review of Mothers' Allowances legislation in all provinces, and several bulletins dealing with old age security programs in Australia, New Zealand, Denmark, the United States, Great Britain, France and Switzerland. The first study to be issued under a General Series was entitled *Survey of Dentists, 1949*. A report of the Supply of Nurses in Canada was prepared at the request of, and presented to the Dominion Council of Health at its 57th meeting, and a report on Health Facilities in the Northwest Territories was prepared in co-operation with the Directorate of Indian Health Services.

Health Insurance

Health insurance research was expanded during the year. A Health Insurance Research unit was established to meet the increasing demands made on the division for research in this field. The division took an active part in the work of two sub-committees of the Interdepartmental Committee on Social Security, the working committee on Health Insurance and the working committee on Old Age Pensions.

With the employment in the latter part of the year of a Research Assistant on a full-time basis for budget study analyses, the division extended its activities in the area of family income and expenditure studies, particularly in relation to Family Allowances, Old Age Pensions, recreational and Health Insurance programs.

During the year the division was represented on, and contributed to the work of, a number of other committees, such as the Interdepartmental Committee on Maritime Development, the Canadian Association of Administrators of Labour Legislation, the Interdepartmental Committee on Accident Statistics, the Interdepartmental Committee on Family Allowances Statistics, the Interdepartmental Committee on Judicial Statistics and the Medical Advisory Committee to the Dominion Statistician. The Director of the division also served as a member of the steering committee of the Social Work Research Group, of the Conference of Social Work in the United States, an organization devoted to the study of social welfare research, and on the Research Committee of the Canadian Welfare Council and a number of other organizations concerned with different aspects of social welfare. In co-operation with the Personnel Committee of the Canadian Welfare Council, the division developed plans for a Survey of Social Workers in Canada.

As in other years, a number of persons studying on international fellowships, and officials of provincial governments and other organizations, spent some time with the division. Particularly valuable assistance was received from Miss Elva Will, Research Assistant in the Department of Social Services, Australia, who spent three months on the staff of the division before proceeding to the United States on a United Nations' fellowship.

TABLE I

(Child and Maternal Health Division)

BIRTHS, DEATHS AND MARRIAGES IN CANADA, 1926-1948.

Year	Live Births		Stillbirths		Total deaths		Maternal Deaths		Deaths under One Year		Deaths under One Month		Marriages	
	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.
1926.....	232,750	24.7	7,105	30.5	107,454	11.4	1,317	5.7	23,692	102	11,091	48	66,658	7.1
1927.....	234,188	24.3	7,336	31.3	105,292	10.9	1,300	5.6	22,010	94	10,532	45	69,515	7.2
1928.....	236,757	24.1	7,577	32.0	109,057	11.1	1,331	5.6	21,195	90	10,349	44	74,311	7.6
1929.....	235,415	23.5	7,566	32.1	113,515	11.3	1,341	5.7	21,674	92	10,430	44	77,288	7.7
1930.....	243,495	23.9	7,707	31.7	109,306	10.7	1,405	5.8	21,742	89	10,247	42	71,657	7.0
1931.....	240,473	23.2	7,619	31.7	104,517	10.1	1,215	5.1	20,360	85	9,897	41	66,591	6.4
1932.....	235,666	22.5	7,284	30.9	104,377	9.9	1,181	5.0	17,263	73	8,845	38	62,531	6.0
1933.....	222,868	20.9	6,848	30.7	101,968	9.6	1,111	5.0	16,284	73	8,271	37	63,865	6.0
1934.....	221,303	20.5	6,452	29.2	101,582	9.4	1,167	5.3	15,870	72	7,777	35	73,092	6.8
1935.....	221,451	20.3	6,449	29.1	105,567	9.7	1,093	4.9	15,730	71	7,747	35	76,893	7.0
1936.....	220,371	20.0	6,350	28.8	107,050	9.7	1,233	5.6	14,574	66	7,393	34	80,904	7.3
1937.....	220,235	19.8	6,275	28.5	113,824	10.2	1,071	4.9	16,693	76	7,527	34	87,800	7.9
1938.....	229,446	20.5	6,426	28.0	106,817	9.5	968	4.2	14,517	63	7,268	32	88,438	7.9
1939.....	229,468	20.3	6,365	27.7	108,951	9.6	967	4.2	13,939	61	7,038	31	103,658	9.2
1940.....	244,316	21.5	6,634	27.2	110,927	9.8	978	4.0	13,783	56	7,256	30	123,318	10.8
1941.....	255,317	22.2	6,882	27.0	114,639	10.0	901	3.5	15,236	60	7,817	31	121,842	10.6
1942.....	272,313	23.4	7,132	26.2	112,978	9.7	818	3.0	14,651	54	7,653	28	127,372	10.9
1943.....	283,580	24.0	6,801	24.0	118,635	10.1	798	2.8	15,217	54	8,384	30	110,937	9.4
1944.....	284,220	23.8	6,705	23.6	116,052	9.7	776	2.7	15,539	55	8,282	29	101,496	8.5
1945.....	288,730	23.9	6,668	23.1	113,414	9.4	660	2.3	14,823	51	8,244	29	108,029	8.9
1946.....	330,732	26.9	7,121	21.5	114,931	9.4	595	1.8	15,434	47	8,991	27	134,088	10.9
1947.....	359,094	28.6	7,461	20.8	117,725	9.4	554	1.5	16,336	45	9,507	26	127,311	10.1
1948.....	347,307	27.0	6,849	19.7	119,384	9.3	510	1.5	15,164	44	8,897	26	123,314	9.6

TABLE 2
(Civil Service Health Division)
HEALTH UNIT STATISTICS—By Months
Fiscal Year 1949-50

	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
TOTAL VISITS.....	6,995	7,642	7,846	6,496	7,508	9,020	8,980	9,260	9,767	10,494	10,222	11,209	105,439
Male.....	2,728	3,141	3,160	2,806	3,157	3,982	4,077	3,964	4,296	4,628	4,597	4,891	45,427
Female.....	4,267	4,501	4,686	3,690	4,351	5,038	4,903	5,296	5,471	5,866	5,625	6,318	60,012
NATURE OF VISITS—													
First Visits.....	5,118	5,554	5,840	4,779	5,615	6,667	6,451	6,681	6,850	7,329	6,920	7,313	75,117
Repeat Visits.....	1,877	2,088	2,006	1,717	1,893	2,353	2,529	2,579	2,917	3,165	3,302	3,896	30,322
Illness.....	2,524	2,509	2,897	2,653	2,976	3,390	3,358	3,389	3,694	4,200	4,096	4,811	40,497
Accident.....	748	933	950	726	799	868	889	921	1,051	987	934	869	10,675
Consultation.....	806	1,035	773	743	898	754	1,044	1,043	1,929	1,203	1,241	1,477	11,946
Return to Work Visits.....	2,917	3,165	3,226	2,374	2,835	4,008	3,689	3,907	4,093	4,104	3,951	4,052	42,321
Days Lost due to Casual Absence.....	2,906	3,204	3,085	2,206	2,628	4,302	3,848	3,933	4,204	4,166	3,984	4,099	42,565
CLASSIFICATION—													
Respiratory.....	1,583	1,164	827	524	752	2,629	1,892	1,881	2,367	2,491	2,578	2,366	21,054
Digestive.....	653	801	1,115	992	1,214	396	871	1,011	985	971	788	1,011	11,308
Non-respiratory and non-digestive—													
Skin and cellular.....	210	269	466	505	448	248	283	290	253	313	268	329	3,882
Menstrual Disorders.....	371	461	482	414	438	364	433	444	429	413	405	430	5,074
Emotional Disorders, Nervousness.....	93	115	127	92	86	87	112	123	113	93	108	127	1,276
Ill-defined and All Others.....	1,668	2,103	2,159	1,729	2,074	1,868	2,218	2,292	1,984	2,265	2,130	2,346	24,836
NON-INDUSTRIAL INJURIES.....	332	464	486	399	439	378	406	397	448	555	411	428	5,143
INDUSTRIAL INJURIES.....	197	171	173	120	172	196	235	240	267	224	224	268	2,487
CONTAGIOUS DISEASES.....	11	6	5	4	2	1	1	3	4	4	8	8	57
DISPOSAL—													
Sent Home.....	165	135	142	119	175	215	169	178	184	185	220	271	2,158
Return to Work.....	6,830	7,507	7,704	6,377	7,333	8,805	8,811	9,082	9,583	10,309	10,002	10,938	103,281
Referred to H. C.....	76	96	114	91	88	114	149	119	146	169	164	140	1,466
Referred to Family Physician.....	342	370	348	320	444	339	435	405	377	392	417	459	4,648
Referred to Clinic.....	—	46	53	52	39	45	51	45	40	54	41	62	528
Health Centre Consulted.....	—	119	115	102	81	136	186	138	106	139	165	162	1,449
Dept. Contacted.....	—	56	79	116	128	122	154	146	193	214	249	285	1,742
Bed Rest, Quiet Room.....	—	324	444	444	488	479	483	637	698	842	744	1,060	6,643
Home Visits.....	—	—	—	—	5	—	1	1	—	2	1	1	11
Average No. Personnel under Supervision.....	13,738	13,874	13,977	14,282	14,660	14,906	15,268	14,859	15,016	15,065	15,042	15,223	—
No. of HEALTH UNITS in Operation.....	12	12	12	13	13	14	14	14	14	14	14	14	14

TABLE 3
(Civil Service Health Division)
HEALTH CENTRE STATISTICS
Fiscal Year 1949-50

Items	Total
TOTAL VISITS.....	4,611
Male.....	3,124
Female.....	1,487
First Visits.....	2,570
Repeat Visits.....	2,041
PHYSICAL EXAMINATIONS	
Pre-Employment, Permanency, Etc.....	1,010
Obligatory Exam. with Immunization.....	221
Voluntary.....	499
Other.....	565
OTHER SERVICES	
Accident Industrial.....	65
Accident Non-Industrial.....	308
Immunization.....	693
Consultation Interview, etc.....	1,250
DISPOSAL	
Return to Work.....	4,558
Sent Home.....	53
Referred to Family Physician.....	134
LABORATORY PROCEDURES	
Haemoglobin Tests.....	412
Red Blood Counts.....	330
White Blood Counts.....	345
Differential Counts.....	154
Urinalyses.....	2,089
Venepunctures for Serology.....	39
Tests for Sedimentation Rates.....	81
Glucose Tolerance Curves.....	11
Estimations of Fasting Blood Sugars.....	8
Colour Index.....	66
Platelet Count.....	1
Clot Retraction.....	1
X-RAY	
Hand.....	49
Wrist.....	25
Elbow.....	17
Shoulder.....	18
Foot.....	17
Ankle.....	26
Knee.....	18
Pelvis.....	6
Spine—Cervical.....	8
Dorsal.....	12
Lumbar.....	17
Skull.....	1
Sinuses—Frontal.....	9
Jaw.....	2
Nose.....	1
Chest.....	831
Ribs.....	17
Kidney.....	7
Stomach.....	9
Chest.....	1,323
E.C.G.....	104

TABLE 4
(Civil Service Health Division)

RETIREMENTS FROM SERVICE—ACCORDING TO DISABILITY—

Fiscal Year 1949-50

Male-149

Female-34

Total-183

Cause of Disability	AGE GROUPS					
	Under 40	40-44	45-49	50-54	55-59	Total
Infective and Parasitic.....	1	1	.....	1	6	9
Neoplasms.....	.....	1	4	1	1	7
Allergic, endocrine, metabolic, nutritional.....	.....	2	.....	2	4	8
Blood and Blood forming.....	.....	.....	1	.....	.....	1
Mental psychoneurotic personality.....	1	3	2	7	11	24
Nervous systems and sense organs.....	1	2	.....	5	8	16
Circulatory.....	1	2	3	21	38	64
Respiratory.....	.....	.....	2	2	8	12
Digestive.....	.....	.....	.....	2	4	6
Genito-urinary.....	1	.....	.....	1	2	4
Skin and Cellular.....	.....	.....	1	.....	.....	1
Bones and organs of movement.....	1	2	3	6	15	27
Symptoms and Ill-defined.....	1	.....	.....	.....	.....	1
Accidents and results of old injuries.....	.....	.....	.....	3	.....	3
TOTAL.....	7	12	16	51	97	183

TABLE 5
(Family Allowances Division)
FAMILY ALLOWANCES PAYMENTS
Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	\$ 703,836	\$ 805,032	\$ 816,275	\$ 816,213	\$ 818,071	\$ 819,676
Prince Edward Island.....	192,294	204,523	199,267	199,806	200,919	201,871
Nova Scotia.....	1,226,273	1,287,130	1,267,865	1,268,797	1,272,132	1,273,702
New Brunswick.....	1,058,245	1,136,592	1,103,830	1,108,371	1,113,130	1,115,260
Quebec.....	7,575,108	8,185,084	7,914,429	7,947,343	7,963,280	8,000,703
Ontario.....	6,818,767	7,007,328	6,958,632	7,010,664	7,070,580	7,091,267
Manitoba.....	1,263,127	1,301,629	1,292,855	1,300,170	1,308,200	1,305,931
Saskatchewan.....	1,537,599	1,593,503	1,575,489	1,587,842	1,589,744	1,584,832
Alberta.....	1,587,337	1,633,176	1,625,681	1,641,446	1,656,105	1,662,881
British Columbia.....	1,665,796	1,696,356	1,700,206	1,718,096	1,734,692	1,728,951
Northwest Territories and Yukon.....	48,295	47,589	51,578	51,311	49,495	49,371
National.....	\$23,676,677	\$24,897,942	\$24,506,107	\$24,650,059	\$24,776,348	\$24,834,445

	October	November	December	January	February	March	Total
Newfoundland.....	\$ 827,242	\$ 820,778	\$ 827,236	\$ 828,949	\$ 833,535	\$ 835,534	\$ 9,752,377
Prince Edward Island.....	202,318	201,818	202,499	201,899	202,546	202,853	2,412,613
Nova Scotia.....	1,276,793	1,282,626	1,282,783	1,286,776	1,287,263	1,291,026	15,303,166
New Brunswick.....	1,118,501	1,118,844	1,123,581	1,127,572	1,129,309	1,130,338	13,383,573
Quebec.....	8,015,351	8,060,789	8,052,284	8,118,084	8,127,586	8,124,539	96,084,580
Ontario.....	7,100,465	7,133,872	7,168,296	7,194,800	7,218,728	7,252,071	85,025,470
Manitoba.....	1,310,461	1,311,964	1,317,268	1,319,564	1,325,092	1,328,884	15,685,145
Saskatchewan.....	1,580,409	1,584,948	1,581,192	1,580,987	1,582,619	1,585,299	18,964,463
Alberta.....	1,657,802	1,664,852	1,671,338	1,677,599	1,679,183	1,685,215	19,842,615
British Columbia.....	1,740,949	1,756,939	1,762,705	1,772,897	1,782,979	1,788,233	20,848,799
Northwest Territories and Yukon.....	50,674	52,133	51,554	50,669	54,510	51,804	608,983
National.....	\$24,880,965	\$24,989,563	\$25,040,736	\$25,159,796	\$25,223,350	\$25,275,796	\$297,911,784

NOTE: Figures shown are gross and do not include payments subsequently cancelled or refunds received in connection with overpayments.

TABLE 6
(Family Allowances Division)

FAMILIES IN PAY
Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	45,142	47,649	49,007	49,445	49,756	49,887
Prince Edward Island.....	12,928	12,950	13,001	13,076	13,116	13,148
Nova Scotia.....	89,087	89,352	89,582	89,758	89,990	90,113
New Brunswick.....	70,720	70,964	71,150	71,459	71,643	71,744
Quebec.....	489,476	491,639	493,216	495,255	496,881	498,436
Ontario.....	577,804	579,517	581,432	584,404	587,824	589,714
Manitoba.....	102,156	102,526	102,968	103,343	103,625	103,816
Saskatchewan.....	115,173	115,452	116,006	116,391	116,490	116,469
Alberta.....	124,519	125,224	125,772	126,699	127,147	127,909
British Columbia.....	148,161	148,663	149,540	150,511	151,165	151,734
Northwest Territories and Yukon.....	3,591	3,586	3,639	3,658	3,709	3,708
NATIONAL.....	1,778,757	1,787,522	1,795,313	1,803,999	1,811,346	1,816,678
	October	November	December	January	February	March
Newfoundland.....	50,051	50,105	50,350	50,371	50,549	50,694
Prince Edward Island.....	13,182	13,167	13,177	13,174	13,163	13,165
Nova Scotia.....	90,164	90,327	90,483	90,657	90,770	91,012
New Brunswick.....	71,887	71,992	72,191	72,304	72,365	72,410
Quebec.....	498,496	501,311	502,179	504,542	507,256	507,727
Ontario.....	591,461	594,043	597,360	599,486	601,636	603,847
Manitoba.....	104,136	104,402	104,666	104,901	105,212	105,611
Saskatchewan.....	116,484	116,501	116,373	116,479	116,654	116,917
Alberta.....	128,080	128,815	129,661	129,817	130,323	130,686
British Columbia.....	152,504	153,604	154,340	155,161	155,852	156,367
Northwest Territories and Yukon.....	3,742	3,780	3,791	3,786	3,829	3,833
NATIONAL.....	1,820,187	1,828,047	1,834,571	1,840,678	1,847,609	1,852,269

TABLE 7
(Family Allowances Division)
AVERAGE ALLOWANCE PER FAMILY
March, 1950

Newfoundland.....	\$16.48
Prince Edward Island.....	15.41
Nova Scotia.....	14.18
New Brunswick.....	15.61
Quebec.....	16.00
Ontario.....	12.01
Manitoba.....	12.58
Saskatchewan.....	13.56
Alberta.....	12.89
British Columbia.....	11.44
Northwest Territories and Yukon.....	13.51
NATIONAL.....	13.64

TABLE 8
(Family Allowances Division)

CHILDREN IN PAY

Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	122,402	128,542	132,678	134,338	135,296	135,762
Prince Edward Island.....	32,661	32,744	32,856	32,934	33,112	33,224
Nova Scotia.....	207,931	208,223	209,531	210,145	210,836	211,865
New Brunswick.....	182,240	183,060	183,649	184,513	185,243	185,747
Quebec.....	1,305,361	1,309,883	1,313,005	1,317,949	1,320,670	1,324,869
Ontario.....	1,144,559	1,148,770	1,153,774	1,160,221	1,166,920	1,171,531
Manitoba.....	212,346	213,225	214,229	215,511	216,557	216,539
Saskatchewan.....	258,450	258,902	259,060	260,702	261,191	260,639
Alberta.....	267,038	268,369	269,898	271,954	273,905	275,730
British Columbia.....	280,379	282,282	284,249	287,318	289,449	289,460
Northwest Territories and Yukon.....	7,815	7,771	7,902	7,917	8,077	8,003
NATIONAL.....	4,021,182	4,041,771	4,060,831	4,083,502	4,101,256	4,113,369
	October	November	December	January	February	March
Newfoundland.....	136,845	136,944	137,870	138,461	139,074	139,571
Prince Edward Island.....	33,318	33,311	33,384	33,376	33,489	33,588
Nova Scotia.....	211,572	212,139	212,653	212,927	213,411	213,981
New Brunswick.....	186,229	186,576	187,309	187,815	188,261	188,593
Quebec.....	1,323,703	1,330,862	1,334,330	1,341,046	1,346,518	1,350,588
Ontario.....	1,176,056	1,181,688	1,188,150	1,193,469	1,198,968	1,204,558
Manitoba.....	217,283	217,845	218,566	219,205	220,034	220,862
Saskatchewan.....	260,291	260,584	260,428	260,717	261,061	261,623
Alberta.....	274,551	276,668	277,973	278,693	279,859	280,780
British Columbia.....	291,345	293,706	294,978	296,727	298,388	299,838
Northwest Territories and Yukon.....	8,078	8,183	8,237	8,220	8,302	8,281
NATIONAL.....	4,119,271	4,138,506	4,153,878	4,170,656	4,187,365	4,202,263

TABLE 9
(Family Allowances Division)

AVERAGE ALLOWANCE PER CHILD
March, 1950

Newfoundland.....	\$5.99
Prince Edward Island.....	6.04
Nova Scotia.....	6.03
New Brunswick.....	5.99
Quebec.....	6.01
Ontario.....	6.02
Manitoba.....	6.02
Saskatchewan.....	6.06
Alberta.....	6.00
British Columbia.....	5.96
Northwest Territories and Yukon.....	0.25
NATIONAL.....	6.01

TABLE 10
(Family Allowances Division)

COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS
Between Month of March, 1949 and Month of March, 1950

Province	Month of March, 1949						Month of March, 1950					
	Families in Pay			Children in Pay			Families in Pay			Children in Pay		
	Number	Average Allowance per Family		Number	Average Allowance per Child		Number	Average Allowance per Family		Number	Average Allowance per Child	
		\$	cts.		\$	cts.		\$	cts.		\$	cts.
Newfoundland.....							50,694			139,571		
Prince Edward Island.....	12,920	14.89		32,621	5.90	192,439	13,165	15.41		33,588	5.99	835,534
Nova Scotia.....	88,927	13.76		207,282	5.90	1,224,093	91,012	14.18		213,981	6.03	202,853
New Brunswick.....	70,610	14.96		181,921	5.81	1,056,297	72,410	15.61		188,593	5.99	1,291,026
Quebec.....	488,263	15.47		1,302,242	5.80	7,555,992	507,727	16.00		1,350,588	6.01	8,124,539
Ontario.....	575,961	11.81		1,140,778	5.96	6,803,098	603,847	12.01		1,204,558	6.02	7,252,071
Manitoba.....	101,917	12.36		211,752	5.95	1,259,377	105,611	12.58		220,862	6.02	1,328,884
Saskatchewan.....	115,170	13.37		258,370	5.96	1,539,635	116,917	13.56		261,623	6.06	1,585,299
Alberta.....	124,173	12.75		266,133	5.95	1,582,711	130,686	12.89		280,780	6.00	1,685,215
British Columbia.....	147,630	11.24		279,769	5.93	1,659,147	156,367	11.44		299,838	5.96	1,788,233
Northwest Territories and Yukon..	3,579	12.71		7,785	5.84	45,478	3,833	13.51		8,281	6.25	51,804
NATIONAL.....	1,729,150	13.25		3,888,653	5.89	22,918,267	1,852,269	13.64		4,202,263	6.01	25,275,796

TABLE 10 (Concluded)
INCREASE SHOWN IN COMPARING FAMILY ALLOWANCES PAYMENTS
March, 1949 and March, 1950

Province	Increase in Number of Families in Pay		Increase in Number of Children in Pay		Increase in Amount Paid	
	Number	Percent	Number	Percent	Amount	Percent
Newfoundland.....	50,694	.....	139,571	.....	835,534	.....
Prince Edward Island.....	245	1.90%	967	2.96%	\$ 10,414	5.41%
Nova Scotia.....	2,085	2.34	6,699	3.23	66,933	5.47
New Brunswick.....	1,800	2.55	6,672	3.67	74,041	7.00
Quebec.....	19,464	3.99	48,346	3.71	568,547	7.52
Ontario.....	27,886	4.84	63,780	5.59	448,973	6.60
Manitoba.....	3,694	3.62	9,110	4.30	69,507	5.52
Saskatchewan.....	1,747	1.52	3,253	1.26	45,664	2.96
Alberta.....	6,513	5.24	14,647	5.50	102,504	6.48
British Columbia.....	8,737	5.92	20,069	7.17	129,086	7.78
Northwest Territories and Yukon.....	254	7.10	496	6.37	—9,235*	—15.13
NATIONAL.....	123,119	7.12%	313,610	8.06%	\$2,341,968	10.21%

* Decrease in amount paid is accounted for by the large adjustment payments made during the month of March 1949.

TABLE II
(Family Allowances Division)

TRANSFER OF FAMILY ALLOWANCES ACCOUNTS BETWEEN PROVINCES
Fiscal Year 1949-50

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T. and Yukon	Total
TRANSFERS IN:												
April.....	—	19	89	50	176	403	133	185	250	298	17	1,620
May.....	46	26	127	71	251	583	215	287	321	305	20	2,252
June.....	41	56	175	128	308	646	249	308	362	401	27	2,701
July.....	27	52	115	114	246	601	311	314	403	428	29	2,640
Aug.....	26	45	146	71	246	587	207	182	352	351	28	2,241
Sept.....	18	36	184	131	380	669	274	299	505	550	39	3,085
Oct.....	59	52	191	136	337	1,000	319	274	404	587	31	3,390
Nov.....	34	40	205	129	487	808	341	259	593	664	45	3,605
Dec.....	47	18	145	129	320	827	206	209	466	428	27	2,822
Jan.....	37	29	128	88	360	703	219	204	335	533	34	2,670
Feb.....	24	17	120	75	272	501	166	139	283	314	26	1,937
March.....	37	17	151	53	286	450	151	155	205	242	19	1,766
Total.....	396	407	1,776	1,175	3,669	7,778	2,791	2,815	4,479	5,101	342	30,729
TRANSFERS OUT:												
April.....	—	24	127	97	209	330	218	225	233	354	26	1,843
May.....	3	20	169	119	224	503	218	297	201	434	16	2,204
June.....	24	37	221	158	377	878	219	259	254	436	9	2,872
July.....	42	20	153	82	293	492	392	351	305	425	18	2,573
August.....	58	32	130	116	233	477	231	332	287	405	17	2,318
September.....	65	38	166	143	464	765	274	539	288	463	39	3,244
October.....	89	60	285	234	414	691	272	531	374	386	32	3,368
November.....	97	40	230	189	431	791	388	696	383	347	24	3,616
December.....	50	47	184	174	342	430	354	589	169	255	18	2,612
January.....	65	30	197	139	215	513	225	346	462	277	22	2,491
February.....	44	30	135	118	219	379	164	218	235	302	12	1,856
March.....	19	23	104	158	232	386	154	213	214	249	15	1,767
Total.....	556	401	2,101	1,727	3,653	6,635	3,109	4,596	3,405	4,333	248	30,764

Note: Difference of 35 accounts in transit between provinces.

TABLE 12
(Family Allowances Division)

CLASSIFICATION OF FAMILIES BY NUMBER OF CHILDREN,
Showing Increases and Decreases in Number of Families, with Percentages

Number of Children in Family	Number of Families as at				
	March 31, 1946	March 31, 1947	March 31, 1948	March 31, 1949	March 31, 1950
1 Child.....	554,026	645,684	685,251	699,905	730,586
2 Children.....	385,464	444,415	472,448	495,176	539,831
3 ".....	207,241	231,494	238,512	254,682	278,161
4 ".....	114,992	120,872	124,277	127,679	140,051
5 ".....	63,676	67,024	67,602	69,298	74,380
6 ".....	37,352	38,012	37,126	38,277	41,353
7 ".....	21,486	21,967	22,088	21,783	23,721
8 ".....	12,164	12,471	12,365	12,141	13,027
9 ".....	6,210	6,349	6,132	6,130	6,676
10 ".....	2,871	2,907	2,766	2,653	2,895
11 ".....	1,132	1,152	991	1,038	1,149
12 ".....	320	307	304	301	350
13 ".....	106	78	67	76	74
14 ".....	13	17	14	10	13
15 ".....	1	2	1	1	2

TABLE 13
(Family Allowances Division)

STATE OF BIRTH VERIFICATION

Province	Balance still to be verified March 31, 1948	Balance still to be verified March 31, 1949	Balance still to be verified March 31, 1950
Newfoundland.....			30,528
Prince Edward Island.....	204	351	230
Nova Scotia.....	5,980	1,953	1,432
New Brunswick.....	12,528	3,365	4,479
Quebec.....	294,108	95,731	88,905
Ontario.....	23,052	23,709	17,883
Manitoba.....	3,212	3,911	2,642
Saskatchewan.....	2,906	3,220	2,491
Alberta.....	6,280	5,289	3,276
British Columbia.....	6,178	6,570	4,642
Northwest Territories and Yukon.....	1,054	563	313
TOTAL.....	355,502	144,662	156,821

TABLE 14
(Family Allowances Division)

ACCOUNTS IN PAY
THROUGH

Province	Child Placing Agencies		Administrators and Trustees	
	March 31, 1949	March 31, 1950	March 31, 1949	March 31, 1950
Newfoundland.....		221		
Prince Edward Island.....			3	3
Nova Scotia.....	860	920	21	39
New Brunswick.....	203	263	52	37
Quebec.....	2,709	3,446	72	49
Ontario.....	5,914	6,241	114	164
Manitoba.....	660	711	89	26
Saskatchewan.....	780	797	40	50
Alberta.....	530	611	58	79
British Columbia.....	1,194	1,426	5	6
Northwest Territories and Yukon.....			4	3
TOTAL.....	12,850	14,636	458	456

TABLE 15
(Family Allowances Division)
An amendment to the Family Allowances Act effective April, 1949 cancelled the provision for deductions in payments for families with excess of four children
STATEMENT OF NUMBERS OF FAMILIES AND CHILDREN AFFECTED (April 1949)

Province	Size of Family										
	5	6	7	8	9	10	11	12	13	14	15
Newfoundland.....	3,423	2,029	1,116	507	190	59	17	2	.....	.....	.....
Prince Edward Island.....	774	455	219	124	65	35	9	1	2	.....	.....
Nova Scotia.....	4,073	2,356	1,290	671	316	119	53	10	2	.....	.....
New Brunswick.....	4,091	2,647	1,589	961	445	164	73	18	5	.....	.....
Quebec.....	31,334	19,286	12,006	7,422	4,001	1,807	765	225	59	12	1
Ontario.....	14,872	7,143	3,333	1,768	711	277	91	33	5	1	.....
Manitoba.....	3,142	1,510	798	349	148	57	17	4	.....	.....	.....
Saskatchewan.....	4,451	2,220	1,077	566	241	113	28	10	.....	.....	.....
Alberta.....	4,212	1,883	868	382	149	62	17	5	1	1	.....
British Columbia.....	2,706	1,117	491	174	81	23	9	3	.....	.....	.....
Northwest Territories and Yukon.....	136	51	20	3	.....	.....	.....	.....	.....	.....	.....
National.....	73,214	40,697	22,807	12,927	6,347	2,716	1,079	311	74	14	1

TABLE 15 (Concluded)

Province	Number of Accounts Affected	Number of Children Affected	Amount of Monthly Adjustment
Newfoundland.....	7,343	14,296	\$ 22,391.00
Prince Edward Island.....	1,684	3,461	5,650.00
Nova Scotia.....	8,890	18,102	28,319.50
New Brunswick.....	9,993	21,905	36,871.00
Quebec.....	76,918	174,276	295,674.50
Ontario.....	28,234	52,402	80,089.00
Manitoba.....	6,025	11,185	17,191.00
Saskatchewan.....	8,706	16,545	25,933.00
Alberta.....	7,580	13,405	20,182.50
British Columbia.....	4,604	7,739	11,016.50
Northwest Territories and Yukon.....	210	310	413.00
NATIONAL.....	160,187	333,626	\$ 543,731.00

TABLE 16
(Family Allowances Division)

OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID

March 31, 1950.

(These overpayments may have occurred at any time between July 1, 1945, and March 31, 1950)

Province	Overpayments Recoverable by Deductions		Overpayments Recoverable by Collections		Overpayments Uncollectible		Total Overpayments Outstanding	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Newfoundland.....	33	\$ 514.00	20	\$ 285.00	1	\$ 61.00	54	\$ 860.00
Prince Edward Island.....	26	778.00	6	43.00	1	37.00	33	858.00
Nova Scotia.....	96	2,951.00	136	4,014.72	29	946.00	261	7,911.72
New Brunswick.....	96	4,915.00	155	5,498.15	62	3,000.00	313	13,413.15
Quebec.....	1,667	118,578.99	2,616	195,626.12	197	19,216.87	4,480	333,421.98
Ontario.....	273	14,283.30	706	25,956.72	264	11,736.11	1,243	51,976.13
Manitoba.....	73	2,653.00	103	3,172.50	30	1,085.00	206	6,910.50
Saskatchewan.....	63	2,267.00	72	3,676.50	24	821.00	159	6,855.50
Alberta.....	126	4,872.00	181	4,383.00	48	3,302.90	355	12,557.90
British Columbia.....	149	4,574.00	140	5,079.50	53	2,288.25	342	11,941.75
Northwest Territories and Yukon.....	45	1,597.00	49	2,499.95	10	371.20	104	4,468.15
NATIONAL.....	2,647	\$ 157,983.29	4,184	\$ 250,326.16	719	\$ 42,865.33	7,550	\$ 451,174.78

TABLE 16 (Concluded)

ANNUAL REPORT

Province	March, 1949 Total Overpayments Outstanding		March, 1950 Total Overpayments Outstanding		Increase or Decrease in Overpayments Outstanding as at March, 1949
	Number of Accounts	Amount	Number of Accounts	Amount	
Newfoundland.....	.....	.....	54	\$ 860.00	+\$ 860.00
Prince Edward Island.....	22	\$ 313.00	33	858.00	+ 545.00
Nova Scotia.....	257	8,276.00	261	7,911.72	-- 364.28
New Brunswick.....	258	10,719.00	313	13,413.15	+ 2,694.15
Quebec.....	4,704	309,299.09	4,480	333,421.98	+ 24,122.89
Ontario.....	1,431	61,491.56	1,243	51,976.13	-- 9,515.43
Manitoba.....	291	9,213.00	206	6,910.50	-- 2,302.50
Saskatchewan.....	164	6,208.40	159	6,855.50	+ 647.10
Alberta.....	325	10,367.65	355	12,557.90	+ 2,190.25
British Columbia.....	301	10,568.25	342	11,941.75	+ 1,373.50
Northwest Territories and Yukon.....	63	2,939.00	104	4,468.15	+ 1,529.15
NATIONAL.....	7,816	\$429,394.95	7,550	\$451,174.78	+\$21,779.83

TABLE 17
(Family Allowances Division)

OVERPAYMENTS ESTABLISHED FOR FIRST TIME IN 1949-50

Category	Number of Accounts	%	Amount	%	Average O/P per account
Working for wages.....	3,851	28.1	\$122,774.00	(2) 20.2	\$ 32.00
Non-school attendance.....	2,679	19.6	63,470.00	(4) 10.3	24.00
Non-maintenance.....	2,489	18.1	132,223.00	(1) 21.6	53.00
Birth date errors.....	1,410	10.3	104,980.00	(3) 17.1	74.00
Child deceased.....	1,272	9.27	40,614.00	(6) 6.6	32.00
Non-resident.....	345	2.5	12,932.00	(8) 2.1	37.00
Duplicate accounts.....	319	2.3	49,716.00	(5) 8.1	156.00
Internal errors.....	288	2.1	14,464.00	(7) 2.4	50.00
Immigration requirements.....	4	0.03	605.00	(9) 0.1	151.00
Miscellaneous.....	1,066	7.7	69,557.81	11.5	65.00
TOTAL.....	13,723	100%	\$611,335.81	100%	\$45.00

NOTE: Table 16 has reference to overpayments *outstanding* on March 31, 1950, which overpayments may have been set up at any time from July 1, 1945, to March 31, 1950. Table 17 above refers only to overpayments established in 1949-50. Most of these overpayments were recovered in 1949-50, or will be recovered during 1950-51.

TABLE 18
(Family Allowances Division)

CHILD PLACING AGENCIES' TRUST ACCOUNTS
as of December 31, in each calendar year

Province	Year	Receipts	Expendi- tures	Percentage	Not Spent	Accum. Balance	No. of Children	Average Balance
		\$ cts.	\$ cts.	%	\$ cts.	\$ cts.		\$ cts.
Newfoundland.....	1949	22,617 00	13,081 25	57·84	9,535 75	9,535 75	358	26 64
Prince Edward Island.....	1946	.....	.....	.....	.....	.....	.....	.....
	1947	.....	.....	.....	.....	.....	.....	.....
	1948	.....	.....	.....	.....	.....	.....	.....
	1949	147 00	92 00	62·58	53 00	55 00	8	6 88
Nova Scotia.....	1946	128,189 96	56,561 59	44·12	71,628 37	71,628 37	.....	.....
	1947	96,340 93	72,264 67	75·00	24,076 26	95,704 63	.....	.....
	1948	104,799 06	84,451 85	80·58	20,347 21	116,051 84	.....	.....
	1949	113,845 20	69,754 69	61·41	44,090 51	160,142 35	1,549	103 38
New Brunswick.....	1946	12,914 00	6,333 88	49·04	6,580 12	6,580 12	.....	.....
	1947	11,684 58	6,111 65	52·30	5,572 93	12,153 05	.....	.....
	1948	21,853 00	12,206 32	55·85	9,646 68	21,799 73	.....	.....
	1949	34,653 38	23,394 13	67·51	11,259 25	33,058 98	577	57 29
Quebec.....	1946	98,421 00	16,524 30	16·78	31,896 70	81,896 70	.....	.....
	1947	191,592 30	96,048 25	30·13	95,544 05	177,440 75	.....	.....
	1948	221,948 60	178,444 90	80·39	45,503 60	220,944 35	.....	.....
	1949	273,385 21	201,925 60	73·86	71,461 61	292,405 96	7,582	38 67
Ontario.....	1946	774,963 00	384,014 86	49·55	390,948 14	390,948 14	.....	.....
	1947	682,707 84	478,384 75	70·07	204,328 09	595,271 23	.....	.....
	1948	668,060 04	576,616 41	86·31	91,443 63	686,714 86	.....	.....
	1949	709,193 51	646,182 17	91·11	63,011 34	749,726 20	14,084	53 23
Manitoba.....	1946	34,195 56	38,995 35	46·31	45,200 21	45,200 21	.....	.....
	1947	71,981 36	82,658 99	73·15	19,322 37	64,522 68	.....	.....
	1948	89,505 36	75,894 01	84·45	13,911 34	78,433 92	.....	.....
	1949	76,194 45	64,230 15	85·42	10,964 30	89,398 22	1,576	56 72
Saskatchewan.....	1946	58,585 91	4,939 47	8·43	53,646 44	53,646 44	.....	.....
	1947	64,219 20	31,775 10	49·47	32,444 10	86,090 54	.....	.....
	1948	76,878 53	47,554 76	60·29	31,323 77	117,414 31	.....	.....
	1949	30,363 11	63,295 11	66·32	27,068 00	144,482 31	1,690	84 90
Alberta.....	1946	37,709 80	13,532 91	35·88	24,176 89	24,176 89	.....	.....
	1947	41,688 72	20,946 57	50·24	20,742 15	44,919 04	.....	.....
	1948	44,159 74	28,957 05	65·64	15,172 69	60,091 73	.....	.....
	1949	70,605 18	44,167 44	62·55	26,437 74	86,644 86	1,400	61 89
British Columbia.....	1946	143,628 95	134,467 79	93·62	9,161 16	9,161 16	.....	.....
	1947	77,455 26	64,750 15	83·59	12,705 11	21,866 27	.....	.....
	1948	78,223 13	65,390 08	83·59	12,833 05	34,699 32	.....	.....
	1949	80,249 21	65,028 68	81·03	15,220 53	49,919 85	1,893	26 51
Northwest Territories..... and Yukon	1946	.....	.....	.....	.....	.....	.....	.....
	1947	.....	.....	.....	.....	.....	.....	.....
	1948	.....	.....	.....	.....	.....	.....	.....
	1949	.....	.....	.....	.....	.....	.....	.....
Dominion Totals.....	.....	.....	.....	.....	.....	1,615,369 48	30,687	52 64

TABLE 19
(Family Allowances Division)
REGIONAL OFFICERS' SUMMARY
Report for Year Ending March 31, 1950

1. Registrations Received	Applicants	Children
(a) Original (white) registrations.....	168,634	194,813
(b) Supplementary (blue) registrations.....	247,117	253,287
(c) Transfers In (from other Provinces).....	31,447	55,758
TOTAL.....	447,198	503,858
3. Number of active accounts.....		1,866,034
2. Suspended accounts at end of year.....		13,765
4. School attendance and Juvenile Work		
(a) Number of children reported.....		67,987
(b) Number of children in respect of whom allowances were discontinued:		
(i) working for wages.....		22,898
(ii) unlawful absence from school.....		10,475
TOTAL.....		33,373
(c) Number of children on whose behalf allowances were reinstated:		
(i) having ceased to work for wages.....		1,743
(ii) having resumed attendance at school.....		8,670
TOTAL.....		10,413
5. Welfare Investigations Completed		
(a) Through Provincial Government.....		3,117
(b) Through other agencies.....		1,329
(c) By Regional Office staff.....		4,571
TOTAL.....		9,017

TABLE 20
(Food and Drug Divisions)
DRUGS EXAMINED
Fiscal Year 1949-50

Laboratory at	Do-mestic	Imports	Total	Passed by Inspectors at Customs	Grand Total	Adul-terated	Mis-branded	O.I.*
Halifax.....	253	1,176	1,429	978	2,407	70	328	1
Montreal.....	1,361	618	1,979	15,015	16,994	80	581	.....
Ottawa.....	413	43	456	141	597	65	1	.....
Toronto.....	323	1,184	1,507	3,435	4,942	22	539	52
Winnipeg.....	479	1,452	1,931	5,893	7,824	28	1,079	1
Vancouver.....	522	1,592	2,114	3,523	5,637	51	936	259
TOTAL....	3,351	6,065	9,416	28,985	38,401	316	3,464	313

*O.I.—Other Infractions.

TABLE 21
(Food and Drug Divisions)

EXAMINATION OF DOMESTIC FOODS
Fiscal Year 1949-50

	Laboratories						Adult- erated	Mis- brand- ed	* O.I.	Totals
	Hali- fax	Mont- real	Otta- wa	To- ronto	Winni- peg	Van- couver				
Alimentary Pastes.....	1	2	.....	8	13	.....	1	8	.....	24
Baking Powder—Leavening.....	19	10	.....	18	15	1	7	5	.....	63
Bakery Products—Cakes, Pastry, etc.....	110	12	17	43	20	6	2	138	.....	208
Beverage and Beverage Concen- trates.....	239	529	2	119	214	32	36	188	.....	1135
Bread, Flour and Cereals.....	84	380	30	17	55	8	40	62	.....	574
Breakfast Foods.....	.....	.....	2	4	1	.....	.....	2	.....	7
Confectionery.....	121	9	15	26	54	13	15	122	.....	238
Dairy Products.....	100	641	111	408	210	84	995	30	.....	1554
Dessert Powders and Mixes.....	73	98	.....	31	36	.....	.....	96	.....	238
Eggs and Egg Products.....	.....	.....	1	3	1	2	.....	2	.....	7
Fish and Fish Products.....	201	16	30	13	11	209	23	37	.....	480
Food Colours and Flavours.....	101	7	28	30	46	7	19	79	.....	219
Fruit—Fresh.....	1	2	.....	.....	14	.....	.....	1	.....	17
Fruit—Canned.....	103	16	4	11	21	7	201	12	.....	162
Fruit—Dried.....	35	.....	24	9	15	9	7	3	.....	92
Fruit—Glazed or Candied.....	3	.....	.....	2	29	2	1	14	.....	36
Gelatin.....	1	2	25	.....	3	.....	2	1	.....	31
Honey or Honey Products.....	21	1	7	.....	24	.....	4	18	.....	53
Jams and Jellies.....	42	1	.....	164	15	2	14	18	.....	224
Juices and Syrups.....	27	7	7	2	86	3	3	24	.....	132
Lard and Shortening.....	.....	.....	17	.....	.....	4	.....	.....	.....	21
Liquors Distilled and Fermented.....	64	.....	13	.....	.....	18	.....	1	18	95
Meat and Meat Products.....	146	661	65	85	246	357	327	814	.....	1560
Nuts.....	14	1	11	19	35	3	10	27	.....	83
Oils.....	11	7	.....	11	1	.....	.....	5	.....	30
Pickles.....	14	.....	.....	2	56	.....	3	10	.....	72
Preservatives.....	.....	.....	.....	3	2	.....	.....	2	.....	5
Salad Dressings—Sandwich.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spreads and other Condiments.....	30	.....	4	29	38	8	16	41	.....	109
Soup and Soup Mixes.....	1	.....	1	.....	5	.....	.....	2	.....	7
Spices.....	64	17	1	41	39	84	10	56	.....	246
Sugar and Substitutes.....	12	1	.....	.....	9	.....	.....	8	.....	22
Sweeteners, Artificial.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Syrups and Molasses.....	15	3	.....	2	14	1	6	17	.....	35
Vegetables—Canned.....	400	2	5	1108	61	2	95	12	1	1578
Vegetables—Dried.....	4	17	6	7	4	7	2	7	.....	45
Vegetables—Fresh.....	5	.....	1	4	1	.....	.....	4	.....	11
Vinegar.....	32	.....	.....	15	3	.....	.....	6	.....	50
Water.....	19	20	6	.....	13	.....	.....	18	.....	58
Miscellaneous.....	14	.....	9	7	42	1	6	12	.....	73
Grand Totals.....	2128	2462	442	2241	1452	870	†1854	†1903	†19	9595

† Not included in Grand Totals.
* Other Infractions.

TABLE 22
(Food and Drug Divisions)

EXAMINATION OF IMPORTED FOODS
Fiscal Year 1949-50

	Laboratories						Adult- erated	Mis- brand- ed	Totals
	Hali- fax	Mont- real	Otta- wa	Tor- onto	Winni- peg	Van- couver			
Alimentary Pastes.....		1						1	1
Baking Powder-Leavening Agents or Chemicals.....	2					1		1	3
Bakery Products—Cakes, Pastry, etc....	4	13		43	14	75		33	149
Beverage and Beverage Concentrates.....	14	3		12	52	29	9	28	110
Bread, Flour and Cereals.....	5	9		1	4	21	1	13	40
Confectionery.....	43	46	12	41	85	295	19	132	522
Dairy Products.....	13	176		16	11	77	43	96	293
Dessert Powders and Mixes.....		3	3	5		3	2	3	14
Eggs and Egg Products.....				1				1	1
Fish and Fish Products.....	39	63	1	27	288	130	94	53	548
Food Colours and Flavours.....	12	6		18	4	33	4	29	73
Food, Oriental.....	12				130			105	142
Fruit—Fresh.....	13	41	5		850	478	14	5	1,387
Fruit—Canned.....	4	2		2		122		3	130
Fruit—Dried.....	525	220	6	142	82	462	20	13	1,437
Fruit—Glazed or Candied.....						1			1
Gelatin.....	2		3			2	2		7
Honey and Honey Products.....	3								3
Jam and Jellies.....	3			3		15	2	4	21
Juices and Syrups.....	134	3		1	1	42		21	181
Liquors Distilled and Fermented.....	1								1
Meat and Meat Products.....	1			6		5		5	12
Nuts.....	721	741	15	321	718	666	81	39	3,182
Oils.....	2	23		6		12		15	43
Pickles.....	1				3			3	4
Preservatives.....		1			3			3	4
Salad Dressings—Sandwich Spreads and Other Condiments.....	13			10	14	30	2	20	67
Spices.....	53	146	1	11	66	89	17	20	366
Sugar Substitutes.....	1								1
Syrups and Molasses.....	51	428				1	19		480
Vegetables—Canned.....	1			2		11		1	14
Vegetables—Dried.....	2	3	1	1	13	26		5	46
Vegetables—Fresh.....	1						1		1
Vinegar.....		7		1		7		2	15
Water.....		3							3
Miscellaneous.....	12			9	40	11	2	18	72
Grand Totals.....	1,688	1,938	47	679	2,378	2,644	332*	672*	9,374

* These totals are not included in the Grand Total.

TABLE 23
(Narcotic Control Division)
IMPORTS OF MAIN NARCOTICS
For Period 1940-1949 Inclusive
Unit of Weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Pre- parations	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol	Amidone
1940.....	4,961	5,839	4,940	1,130	819	352	13	20	35,518	.....	.....
1941.....	5,600	15,032	3,354	880	1,681	764	9	139	16,120	.....	.....
1942.....	.....	2,088	2,865	682	1,831	147	14	122	15,291	.....	.....
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777	.....	.....
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,211	.....
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085	.....
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539	.....
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018	.....
1948.....	3,200	3,040	3,013	1,019	993	919	26	2,809	34,058	5,175	892
1949.....	1,720	3,202	3,168	906	666	1,433	11	943	37,751	4,106	1,068

TABLE 24
(Narcotic Control Division)

ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS

For period 1940-1949 Inclusive

Unit of Weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Pre- parations	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol
1940.....	6,173	5,538	3,527	882	1,446	498	13	168	18,143	.....
1941.....	2,363	10,123	3,527	1,023	1,376	528	14	56	19,964	.....
1942.....	3,562	8,219	3,704	917	1,517	615	14	138	21,983	.....
1943.....	3,704	5,645	4,445	811	1,623	739	12	171	21,630	.....
1944.....	3,810	7,090	3,633	740	1,480	1,458	14	280	22,241	1,042
1945.....	3,175	6,314	3,351	670	1,305	691	12	381	22,809	1,102
1946.....	3,422	4,797	3,492	1,058	1,552	1,110	22	455	36,191	2,045
1947.....	3,932	4,734	3,090	881	1,390	1,107	15	715	36,484	5,894
1948.....	2,090	6,026	2,074	995	1,407	1,032	22	1,416	39,672	5,642
1949.....	2,010	3,606	2,718	898	1,197	949	16	1,359	44,443	6,852

TABLE 25
(Narcotic Control Division)

CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT

For the Judicial Year Ended September 30, 1949

Province	NATURE OF OFFENCE				DRUGS INVOLVED									
	Possession of Drugs	Selling, Offering, Giving away and Delivering	Causing to be Transported	Total	Opium and Tr. Opium	Morphine	Heroin	Derivative of Morphine probably Heroin	Demerol	Marihuana	Cocaine	Alleged Drug	Methadone	Total
Newfoundland.....														
Prince Edward Island.....														
Nova Scotia.....														
New Brunswick.....														
Quebec.....	46	8		54	2	1	46			5				54
Ontario.....	121	6		127	3	11	97	7	6		1	1	1	127
Manitoba.....	9		1	10			9		1					10
Saskatchewan.....	2			2		1	1							2
Alberta.....	22	1		23	2	10	11							23
British Columbia.....	136	3		139	3	2	134							139
Totals.....	336	18	1	355	10	25	298	7	7	5	1	1	1	355

TABLE 26
(Old Age Pensions Division)

NUMBER OF PENSIONERS AND PERCENTAGE OF POPULATION, BY PROVINCES
Fiscal Year 1949-50

Province	Number of pensioners	*Percentage of pensioners to total population	*Percentage of pensioners to population over 70 years of age
Alberta.....	16,445	1.89	46.45
British Columbia.....	28,988	2.60	43.20
Manitoba.....	16,868	2.17	45.71
New Brunswick.....	16,231	3.15	71.82
Newfoundland.....	10,296	2.96	77.41
Nova Scotia.....	19,966	3.10	58.04
Ontario.....	85,100	1.93	35.59
Prince Edward Island.....	2,976	3.17	46.50
Quebec.....	69,017	1.78	51.85
Saskatchewan.....	16,566	1.92	44.89
Northwest Territories.....	23	.19	12.57
Yukon Territory.....	108	2.20	32.93
CANADA.....	282,584	2.09	45.16

*Percentages based on the estimated population as at June 1, 1949 (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 census.

TABLE 27
(Old Age Pensions Division)

TOTAL PAYMENTS AND AVERAGE MONTHLY PAYMENTS, BY PROVINCES
Fiscal Year 1949-50

Province	Average Monthly Pension	Dominion's Payments for Fiscal Year 1949-50	Dominion's Payments since Inception of Act
Alberta.....	\$ 37.90	\$ 5,182,534.12	\$ 39,037,016.61
British Columbia.....	37.17	9,072,353.74	57,269,439.44
Manitoba.....	38.44	5,578,655.98	46,870,423.96
New Brunswick.....	36.22	5,083,788.47	31,840,592.74
Newfoundland.....	29.47	2,229,446.41	2,229,446.41
Nova Scotia.....	35.41	6,056,998.50	42,029,324.04
Ontario.....	38.06	27,863,894.69	223,230,255.24
Prince Edward Island.....	34.36	865,299.30	4,855,471.81
Quebec.....	37.73	22,328,643.76	141,666,155.56
Saskatchewan.....	37.30	5,356,205.13	45,627,464.00
Northwest Territories.....	39.71	9,898.84	58,981.25
Yukon Territory.....	38.65	24,484.38	24,484.38
TOTAL.....		\$ 89,652,203.32	\$ 634,739,055.44

TABLE 28
(Old Age Pensions Division)

NUMBER OF BLIND PENSIONERS AND PERCENTAGE OF POPULATION,
BY PROVINCES
Fiscal Year 1949-50

Province	Number of Pensioners	*Percentage of Pensioners to total population
Alberta.....	453	.052
British Columbia.....	629	.056
Manitoba.....	539	.069
New Brunswick.....	1,047	.203
Newfoundland.....	171	.049
Nova Scotia.....	962	.149
Ontario.....	2,243	.051
Prince Edward Island.....	129	.137
Quebec.....	3,869	.100
Saskatchewan.....	472	.055
Northwest Territories.....	1	.008
Yukon Territory.....	2	.041
CANADA.....	10,517	.078

* Percentages based on the estimated population as at June 1, 1949, (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 census.

TABLE 29
(Old Age Pensions Division)

TOTAL PAYMENTS TO BLIND AND AVERAGE MONTHLY PAYMENTS,
BY PROVINCES
Fiscal Year 1949-50

Province	Average Monthly Pension	Dominion's Payments for Fiscal Year 1949-50	Dominion's Payments since Inception of Act
Alberta.....	\$ 38.68	\$ 148,295.29	\$ 716,852.14
British Columbia.....	38.17	204,086.42	1,005,638.49
Manitoba.....	39.29	184,497.01	994,602.99
New Brunswick.....	39.06	357,877.50	2,047,991.90
Newfoundland.....	29.38	35,662.30	35,662.30
Nova Scotia.....	38.44	311,947.90	1,755,889.37
Ontario.....	38.88	778,909.71	4,367,169.02
Prince Edward Island.....	37.66	40,336.10	257,296.21
Quebec.....	39.07	1,312,410.08	6,905,809.43
Saskatchewan.....	38.91	161,883.66	936,132.55
Northwest Territories.....	40.00	585.00	1,580.00
Yukon Territory.....	40.00	240.00	240.00
TOTAL.....		\$ 3,536,730.97	\$ 19,024,864.40

TABLE 30
(Physical Fitness Division)

ASSISTANCE TO PROVINCES AND PROVINCIAL EXPENDITURES

Under National Physical Fitness Act, 1949-50

Province	Expenditure					
	Total			Per Capita		
	Provincial	Federal	Total	Provincial	Federal	Total
	\$ cts.	\$ cts.	\$ cts.			
Prince Edward Island.....	8,141.48	1,858.50	9,999.98	8.566	1.955	10.521
Nova Scotia.....	22,836.69	(b) 11,426.92	34,263.61	3.951	(b) 1.977	5.928
New Brunswick.....	11,963.39	8,943.75	20,907.14	2.616	1.955	4.571
Ontario.....	(a) 382,736.75	(a) 74,063.25	(a) 456,800.00	10.105	1.955	12.060
Manitoba.....	(a) 8,689.93	(a) 8,689.93	(a) 17,379.86	1.191	1.191	2.382
Saskatchewan.....	29,211.83	17,520.75	46,732.58	3.260	1.955	5.215
Alberta.....	27,002.73	15,567.75	42,570.48	3.391	1.955	5.346
British Columbia.....	101,007 00	15,993.00	(b) 117,000.00	12.351	1.955	14.306
Northwest Territories.....	5,743.05	234.00	5,977.05	49.683	1.955	51.638

(a) Estimated—final returns not available.
(b) Includes payments for 15-month period.

TABLE 31
(Quarantine Service)

Ships Boarded By Quarantine Officers, 1949-50

The following table indicates the number of ships boarded during the fiscal year 1949-50, also total personnel on board, divided into their respective groups.

Station	Vessels Inspected	PERSONNEL INSPECTED						
		PASSENGERS				Crews	Cattlemen Stowaways Distressed Seamen etc.	Port Totals
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage			
Halifax, N.S.....	490	7,437	4,386	47,000	8,247	43,429	62	110,561
Saint John, N.B.....	325	589	573	19	87	14,546	35	15,849
Quebec, P.Q.....	1,203	12,658	1,999	27,015	9,981	66,860	108	118,621
William Head, B.C....	776	1,551	1,300	325	218	34,451	44	37,889
TOTALS.....	2,794	22,235	8,258	74,359	18,533	159,286	249	282,920

TABLE 32
(Quarantine Service)

VESSELS INSPECTED FOR DERATIZATION,
1949-50

Port	Vessels Inspected, Fumigated and Deratization Certificates Issued	Vessels Inspected and Exemption Certificates Issued	Vessels Inspected and Time Extended or Certificates Endorsed	Total Vessels Inspected for Vermin	RODENTS RECOVERED	
					Rats	Mice
Halifax, N.S.....	9	52	1	62	17	77
Sydney, N.S.....		7		7		
Saint John, N.B.....	2	20	1	23		
Port Alfred, P.Q.....		28	1	29		
Quebec, P.Q.....	3	7		10		
Trois-Rivieres, P.Q.....		11		11		
Sorel, P.Q.....		3		3		
Montreal, P.Q.....	12	108	31	151	131	132
Vancouver, B.C.....	81	92	269	442	196	
Victoria, including Esquimalt, B.C.....	1	19	39	59		
Port Alberni, B.C.....		8	17	25		
TOTALS.....	108	355	359	822	344	209

TABLE 33
(Immigration Medical Service)

SUMMARY OF ACTIVITIES
Fiscal Year 1949-50

<i>Canada</i>	
Immigrants medically inspected on arrival at ocean and air ports.....	78,762
Non-immigrants medically inspected on arrival at ocean and air ports.....	18,645
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b) and (k).....	29
Certified as physically defective, Sec. 3, (c).....	283
Refused permanent admission for medical reasons, at ocean and air ports.....	22
Total number rejected, at all ports.....	400
<i>Overseas—(United Kingdom, Continent and Orient)</i>	
Prospective emigrants medically examined.....	81,998
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b), (k) and (l).....	1,573
Certified as physically defective, Sec. 3, (c).....	10,933
Refused admission.....	1,943
Re-examinations.....	17,331
<i>United Kingdom</i>	
Prospective emigrants medically examined.....	21,835
<i>Continent</i>	
Prospective emigrants medically examined.....	58,270
<i>Orient</i>	
Prospective emigrants medically examined.....	1,893
<i>Examinations Overseas:</i>	
By Canadian Medical Officers in British Isles.....	11,730
By Roster Doctors in British Isles.....	10,105
By Canadian Medical Officers on the Continent.....	53,420
By Roster Doctors on the Continent.....	4,850
By Roster Doctors in the Orient.....	1,893
	<hr/>
	81,998

TABLE 34
(Immigration Medical Service)

DETAILS OF EXAMINATIONS
Fiscal Year 1949-50

	Immigrants	Non-Immigrants
Gander, Newfoundland.....	1,164	2,185
St. John's, Newfoundland.....	555	360
Sydney, N.S.....	192	456
Halifax, N.S.....	40,193	2,538
Saint John, N.B.....	412	94
Moncton, N.B.....	17	15
Quebec, P.Q.....	24,647	6,796
Port Alfred, P.Q.....	67	110
Three Rivers, P.Q.....	12	7
Dorval, P.Q.....	1,472	2,955
Montreal, P.Q.....	677	588
Malton, Ont.....	171	963
Vancouver, B.C.....	521	1,206
Victoria, B.C.....	151	161
Other Ports.....	39	211
Ports (not stated).....	135	
U.S.A. Ports.....	8,337	
	<hr/>	<hr/>
TOTAL.....	78,762	18,645
Rejections.....	400	

TABLE 35
(Immigration Medical Service)
CERTIFICATIONS AND DISPOSITIONS OF CASES
Fiscal Year 1949-50
CANADIAN PORTS

	Admitted	Deported	Pending	Totals
Section 3, s.s. (a), Mental diseases and defects.....		3	2	5
Section 3, s.s. (b), Loathsome diseases, including tuberculosis.....	9*	11	2	22
Section 3, s.s. (c), Physical diseases and defects.....	133	8	142	283
Section 3, s.s. (k), Constitutional psychopathic inferiority.....			2	2
TOTALS.....	142	22	148	312

* Refugees.

OVERSEAS

	CERTIFICATIONS					Totals
	British Isles		Continent			
	Examined by Canadian Medical Officers	Examined by Roster Doctors	Unoccupied Territory		Occupied Territory	
			Examined by Canadian Medical Officers	Examined by Roster Doctors	Examined by Canadian Medical Officers	
Section 3, s.s. (a), Mental diseases and defects.....	47	24	77	3	22	173
Section 3, s.s. (b), Loathsome diseases, including tuberculosis.....	242	134	242	78	541	1,237
Section 3, s.s. (c), Physical diseases and defects.....	1,945	1,410	2,526	366	4,696	10,943
Section 3, s.s. (k), Constitutional psychopathic inferiority....	39	14	4	0	5	62
Section 3, s.s. (l), Chronic alcoholism.....	1	0	0	0	0	1
Totals.....	2,274	1,582	2,849	447	5,264	12,416

TABLE 36
(Sick Mariners Service)
TOTAL NUMBER OF VESSELS—DUES COLLECTED AND EXPENDITURES
Calendar Year 1949

Vessels	Number Vessels Paying Dues	Total Dues Collected	Total Number of Crew	Total Expenditure	Average Expenditure for each Member of Crew
Foreign-going.....	2,081	\$ 223,798.62	76,223	\$ 267,310.47	\$ 3.50
Trading Continually between Canadian Ports.....	3,981	11,212.06	16,429	187,709.44	11.43
TOTAL.....	6,062	\$ 235,010.68	92,652	\$ 455,019.91	\$ 4.91

TABLE 37
(Sick Mariners Service)

SICK MARINERS TREATMENT

Fiscal Year 1949-50

	Ontario	New- foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	British Columbia	Total
Number of Doctors on salary (part time).....				11	2	3	4	20
Total salaries.....				\$12,530.00	\$ 1,824.00	\$ 2,880.00	\$ 6,440.00	\$ 23,674.00
Total number treated by Doctors (on salary).....				3,377	137	671	1,289	5,474
Total Number of Visits.....				10,300	499	920	9,810	21,529
Total Number of Doctors and Dentists (Fee Basis).....				85	43	54	64	298
Total Fees Paid.....		30	22	\$39,036.26	\$ 8,908.12	\$ 8,016.00	\$34,324.78	\$ 97,359.91
Total Number of Seamen Treated.....		\$ 4,516.75	\$ 2,558.00	3,601	955	643	3,411	9,377
Total Number of Visits.....		575	192	10,421	2,060	2,466	4,855	21,464
		1,004	658					
Hospitals Treating Sick Mariners.....	1	14	5	34	19	29	36	138
Total Hospital Costs.....	\$ 715.50	\$ 3,243.54	\$ 3,712.80	\$76,022.47	\$40,201.96	\$68,390.07	\$127,686.97	\$319,973.31
Total Number of Patients (at per diem rate).....	1	49	40	897	326	554	811	2,678
Total Number of Hospital Days.....	79	568	605	14,945	4,668	9,804	12,208	42,956
Total Number of Out-Patients.....		41	16	1,029	188	1,898	1,791	4,963
Total Number of Out-Patient Visits.....		44	31	1,320	264	3,778	4,477	9,914
Private Houses (Emergency Hospitals).....				5	1	1		7
Total Costs.....				\$ 836.00	\$ 31.00	\$ 62.00		\$ 929.00
Total Number of Seamen Treated.....				30	1	1		32
Total Number of Hospital Days.....				300	31	62		392
Clinics (Operated by Department) at—Halifax, Saint John, Quebec, and Vancouver.....				1	1	1	1	4
Total Cost.....				\$ 3,923.00	\$ 1,456.00	\$ 472.00	\$14,422.00	\$ 20,273.00
Total Number of Out-Patients.....				1,459	682	245	3,263	5,649
Total Number of Visits to Out-Patients.....				2,221	844	261	8,338	11,664

